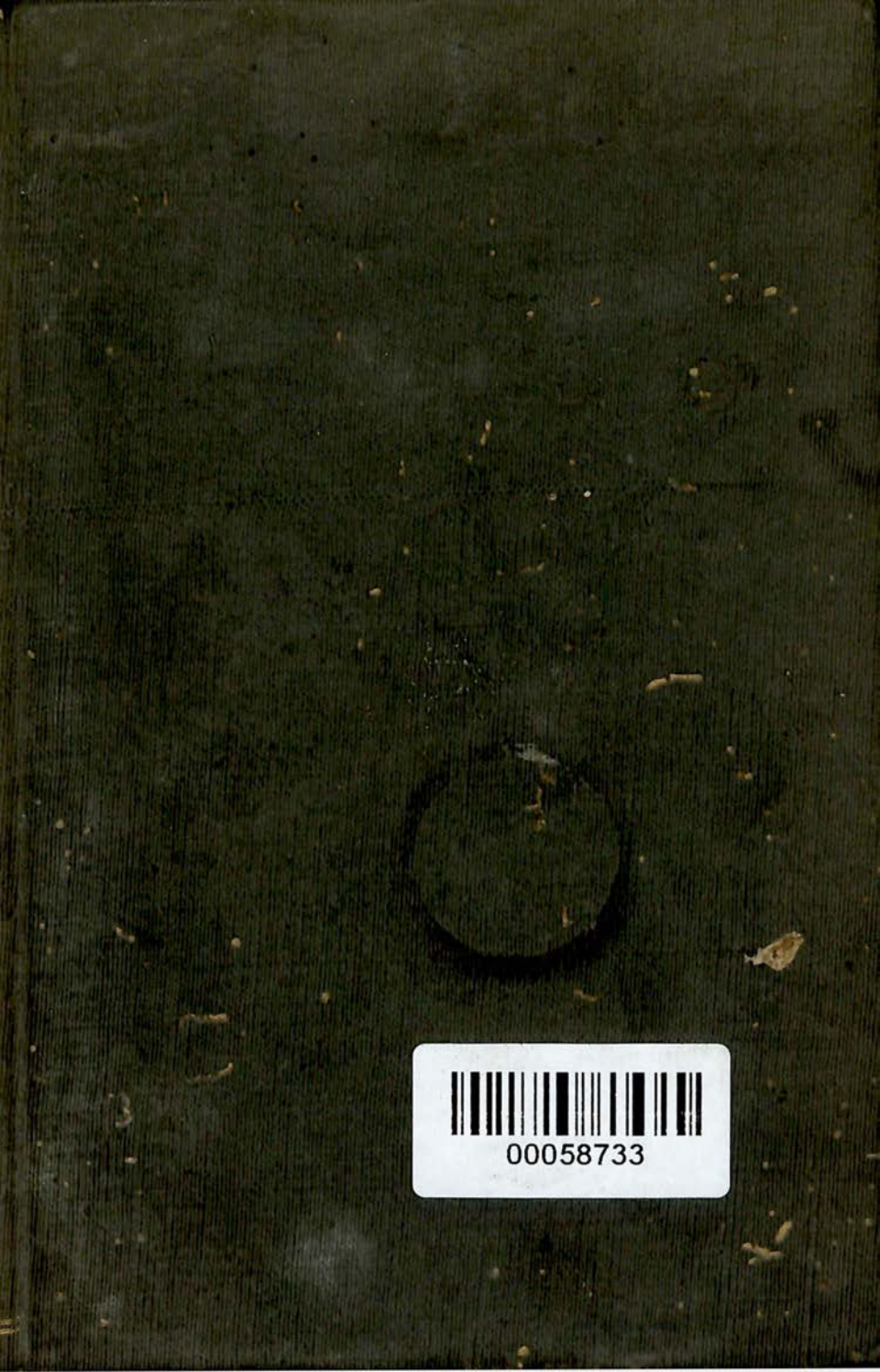
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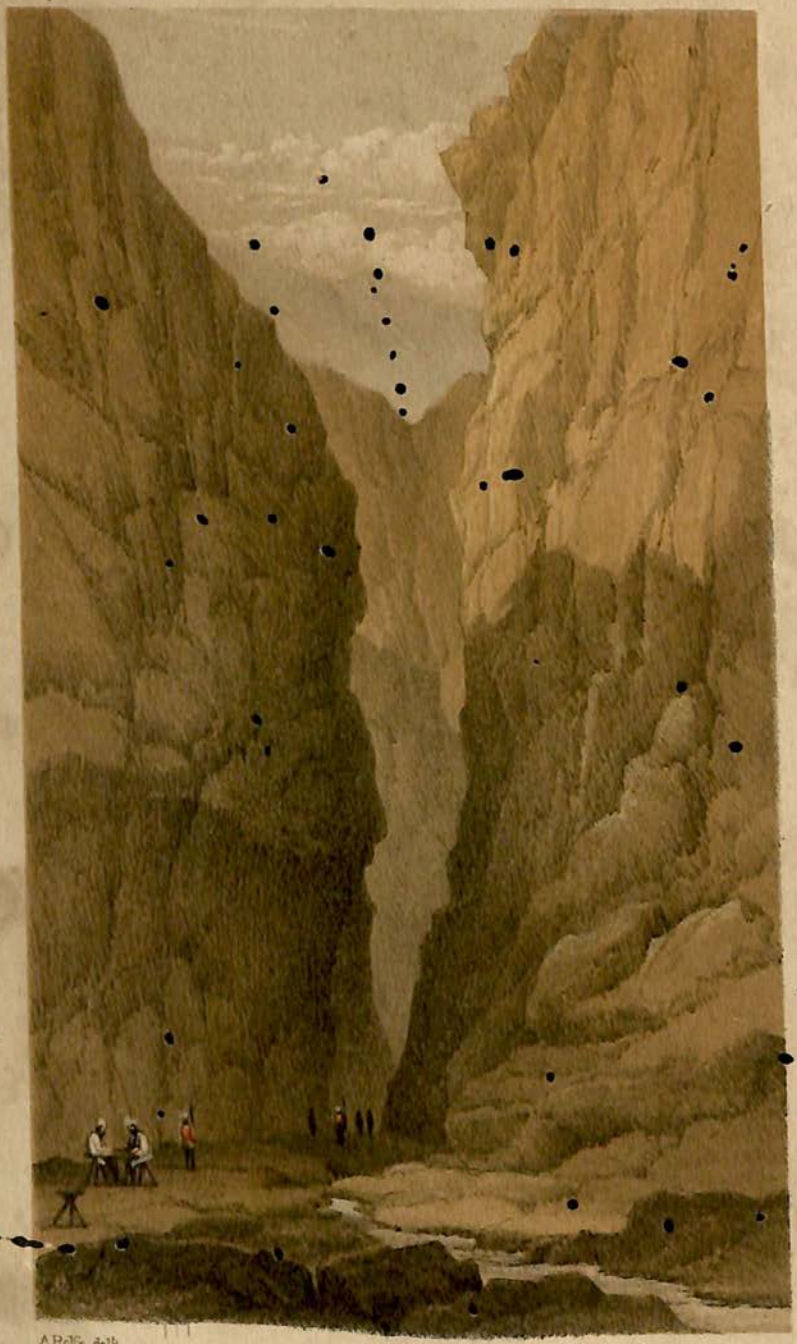

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RECONNOITRING IN ABYSSINIA:

A NARRATIVE OF THE PROCEEDINGS OF

THE RECONNOITRING PARTY,

PRIOR TO THE ARRIVAL OF THE MAIN BODY OF

THE EXPEDITIONARY FIELD FORCE.

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BY

COLONEL H. ST. CLAIR WILKINS,
ROYAL ENGINEERS,

AIDE-DE-CAMP TO THE QUEEN,
COMMANDING ENGINEER ABYSSINIAN EXPEDITIONARY FORCE.

Q.r £10

WITH TEN COLOURED VIEWS FROM SKETCHES MADE IN THE COUNTRY, AND A MAP.

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PREFACE.

ALTHOUGH more than one account of the Abyssinian Expedition has been published, little beyond a passing notice has been accorded by the writers to the operations of the Reconnoitring Party, which preceded the Expeditionary Force. This omission is probably owing to the fact, that the authors did not accompany, or belong to, that Party, and were consequently unwilling to describe what they had not personally witnessed.

The Reconnoitring Force left Bombay as early as the 16th September, and arrived at Massowah on the 1st October, 1867.

During October and November the country was reconnoitred in several directions, and preparations were made on the sea-coast for the arrival of the Expeditionary Force. The line of country which was selected for the route of the British army from

the Red Sea up to the highlands of Abyssinia, was explored by the 8th, and finally decided upon by the Reconnoitring Committee on the 17th November.

The Advance Brigade, sent to support the Reconnoitring Party, arrived in Annesley Bay on the 21st October; and following the route which had been chosen, occupied a post on the highlands on the 6th December, 1867.

The main body of the Expeditionary Force disembarked at Zulla in the months of December and January, and the Commander-in-Chief arrived on the 3rd January, 1868.

It is evident, therefore, from the dates above given, that a narrative of the proceedings of the Reconnoitring Party is required to complete the history of the Abyssinian Expedition; and with this object in view, the present volume has been written.

RECONNOITRING IN ABYSSINIA.

CHAPTER I.

ROUTES.

Object of the Abyssinian Expedition—Composition of the Force—Base of Operations in India—Selection of Routes—Physical Character of Abyssinia—Three Routes from the Red Sea—Government of Bombay ordered to Organize the Expedition—Sir Robert Napier appointed Commander-in-Chief—Northern Routes negatived—Distance of Magdala from the Coast—Country and Coast Tribes on Southern Route—Consul Plowden's Opinion—His Death—Dr. Krapf's Recommendation—M. Munzinger's Report of Routes—Salt Lake Visited by Mr. Coffin—Don Alonzo Mendez—M. Lefebvre—Dangerous Physical Character of the Salt Lake—M. Lefebvre's Sun-stroke—Doctor Beke—His Knowledge of the Country—His Journey to Abyssinia in 1866 on behalf of Prisoners—His Failure—His Discovery of the Course of the River Hadâs—His Recommendations—His Condemnation of any Route from Amphilla Bay, or by the Nile—A Reconnoitring Party ordered to Select the Route to be Adopted by the British Expedition—Doctor Beke's Latest Opinions—Sir William Coghlan's Scheme—Probability of his Appointment as Commander-in-Chief—Duke of Cambridge Selects Sir Robert Napier—Colonel Merewether's Proceedings on Behalf of the Captives—His Excursions—His Visit to Amphilla Bay, and to the Agametta Plateau—Great Heat at Massowah and Tajûra—Rise of the Chief Kâsa in Tigré—

Colonel Merewether recommends Amphilla Bay as the Point of Debarkation—Final Decision of the Ministry—M. Munzinger's Perilous Journey—His Discovery of the Oasis of Ragoolé—Point of Debarkation and Route into Abyssinia still undetermined.

In August, 1867, the British Government resolved upon the invasion of Abyssinia. It was decided to despatch a military expedition to that remote country, for the purpose of releasing from the hands of the Christian King Theodorus a British Consul and an Envoy and suite confined in irons in the fortress of Magdala without just cause, and contrary to the law of nations; and to obtain full satisfaction for the dishonour thus cast upon the British nation.

The country to be invaded being a portion of the continent of Africa situated but a few degrees from the Equator, it was considered advisable that the force to be employed should not be despatched from England; but that troops, with officers and staff, of Indian experience, would be more at home in Abyssinia, and by their organization and equipments adapted to the tropics, better fitted for the particular service in hand. It was also decided that the Expeditionary Force should include native troops, both cavalry and infantry.

Bombay, being the British dependency in India nearest to England and Abyssinia, was fixed upon by the English Government as the base of opera-

tions, from whence the greater portion of the force and materiel should be despatched to the almost terra incognita called Abyssinia.

As soon as the Expedition was determined upon, with Magdala, the objective point, supposed to be situated between 11° and 12° of north latitude, it became necessary to select the route to be adopted by the invading force. The idea of reaching the heart of Abyssinia from Egypt by the Nile was proposed and advocated by Sir Henry Bulwer. This route was, however, negatived for various reasons, physical and political, and it then remained for Government to fix upon some line of approach from the Red Sea.

It was well known that the physical conformation of Abyssinia was rugged in the extreme; that it consisted of a table-land of great elevation, much cut up and intersected by deep ravines, the mountains supporting it being steep, and in many parts very precipitous. Much difficulty was anticipated in penetrating through so rough and mountainous a country, as all travellers reported it to be; but the low land lying between the Red Sea and the base of the Abyssinian mountains was especially to be dreaded, as most injurious to the constitution of Europeans from the extreme tropical heat prevailing, and the generally supposed deficiency of its water supply.

The routes from the Red Sea which came under discussion may be generalized under three heads. The first, proposed by the accomplished Nile explorer, Sir Samuel Baker, was from Souakin, a port in the Red Sea, situated some 300 miles north of Massowah, in 20° north latitude. This entailed a long land journey of 450 miles before the northern provinces of Abyssinia could be reached. The second, proposed by Major-General Sir W. M. Coghlan, R.A., for many years Political Resident and Commandant at Aden, was from Massowah, the Egyptian port of Abyssinia; or from the bays to the south of Massowah, known by the names of Annesley and Amphilla, the routes from which to the highlands led up through rugged and mountainous passes. The third, proposed by the Abyssinian traveller and missionary, Dr. Krapf, was by way of the Gulf of Tajûra, situated one degree south of the Straits of Bab-ul-Mandeb, in the latitude of which the fortress of Magdala was supposed to be situated.

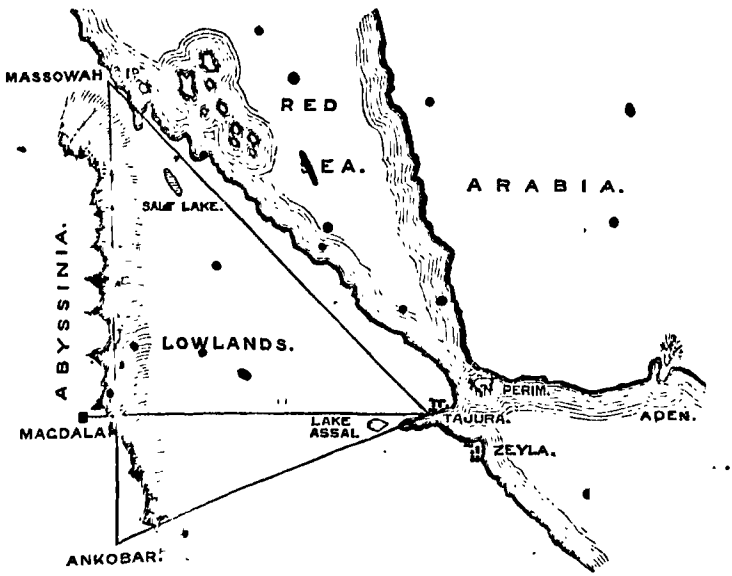
The Secretary of State for India instructed the Government of Bombay, under Sir Seymour Fitzgerald, to organize the Expedition; and appointed Lieutenant-General Sir Robert Napier, Commander-in-Chief of Bombay and Member of Council, to the command of the Expedition as Plenipotentiary and General.

The Bombay Government readily accepted the task, which proved onerous enough, for it was no light matter organizing an expedition for the invasion of an unknown country, distant nearly 2,000 miles, and which was not to be depended upon for supplies of any description, or for the necessary carriage of an army. Not only was it necessary to organize the Expedition in the first instance, but the heavy and responsible duties connected with it never ceased until the termination of the campaign and the return of the troops nearly twelve months afterwards.

The first route named, by Souakin, was negatived on account of the long and desert land journey through Egyptian territory, and the political necessity of avoiding any apparent united action between the British and Egyptian Governments. The choice of a route therefore lay between the Massowah and Tajûra routes, or routes contiguous to either port.

The eastern margin of the highlands of Abyssinia having a direction due north and south, and the shore of the Red Sea south of Massowah bearing south-east, the low land intervening forms an isosceles triangle, the apex at Massowah, Tajûra at one angle of the base, and Ankobar at the other. Magdala was supposed to be situated a short

distance within the highland margin due west of Tajûra, as shown in the diagram :—



The distance from Massowah to Magdala, and from Tajûra to the fortress, was almost identical; the consideration of the Bombay Government was therefore directed to the advantages attending the adoption, broadly, as will be hereafter seen, of either line. On the one hand, the route from Massowah would lead the army across an almost unknown alpine country, with a tolerably cool climate due to elevation above the sea, water supply unknown; on the other, the country to be traversed was com-

paratively level and easy, but badly provided with water, and cursed with an infamous climate.

The route from the Gulf of Tajûra to Ankobar, the capital of Shoa, the southernmost province of Abyssinia, and from which Magdala was supposed to lie some 150 miles due north, was well known to Government. A mission, under the direction of the late Sir William Harris, an officer of the Bombay Engineers, had been sent by the British Government to Sâhela Selassê, the king of Shoa, in the year 1841. Sir William Harris, in his book and despatches, had given a very accurate description of the route he had taken, which passed through a most wretched low country almost devoid of water, and inhabited by savage tribes of Adal and Somal, the heat of the climate being intense.

The character of the natives inhabiting the low-land country near Tajûra and adjacent coasts was known to the Government through Colonel, now Sir William Merewether, and his predecessors, Political Residents at Aden. Mahomedans, not Abyssinians, descendants of Arab invaders, they are divided into tribes which are perpetually at feud with each other; regarding a murder or cowardly assassination with pride, as entitling the murderer to wear, as a distinction, a white ostrich feather in his hair; avaricious in the extreme; and thoroughly untrustworthy and savage.

The writer having in the years 1851 and 1856 visited the country about Tajûra, and the neighbouring Somâli ports of Zêyla, Berbera, and Ainterrâd on shooting expeditions, had made the acquaintance of the nomad races under discussion. For good-humour, savage villainy, treachery, lying, and rapacity, he unhesitatingly awards them the palm amongst all Eastern nations with which he is acquainted.

From the information which existed as to the more direct and westerly line from Tajûra or Raheitâ, *viâ* lakes Assal, Aussa, and Haik, it was considered impracticable, being very unhealthy even for the natives; and from the low level of the country by Lake Assal—the lake being salt, and 570 feet below sea level — sweet water, in any quantity, could not be expected. Moreover, the anchorages at Tajûra, Zêyla, and Raheita, were known to be difficult and bad.*

Concerning this route, the Political Resident at Aden wrote:—"The route from Tajourra (Tajûra) is the shortest and most direct to Magdala, but the inhabitants of the country between Tajourra and Angoba, pagan Danakil, are of the worst description, the most inveterate thieves and murderers on the face of the earth. The distance from Tajourra to Done, near Lake Haik, in Ardoba, is about

* CAPTAIN CRUTTENDEN, I.N.—*Blue Book*, p. 167.

220 miles. For the first hundred there is scarcely any water, and that brackish. Until Abyssinia is reached, that is Angoba, there are no supplies."

For the reasons given, the routes south of the Red Sea Straits could not be entertained, and the more northerly route, or some route nearer the apex of the lowland triangle, was regarded as the solution of the problem.

The information possessed regarding the routes from Massowah and the neighbouring bays into Abyssinia was vague, conflicting, and for the most part conjectural. Consul Plowden, who was unfortunately killed near Gónda, in 1860, by the Chief Garred, a cousin of Theodorus, in rebellion against him, and who of all English travellers was the best acquainted with the Abyssinians and their country, who was also well aware of Mr. Salt's, the Abyssinian traveller's, proposal to open up the Amphilla Bay route, considered the ordinary kâfilah road from Massowah as the best entrance into the country.

It may be mentioned incidentally here, that on the King following up the rebellious Negussieh, accompanied by the Englishman Bell, the Chief Garred and his brother came suddenly upon them in a wood. Before the rebels could throw their spears, Bell shot Garred dead, and was immediately afterwards killed by the brother, whose spear penetrated his forehead. Theodorus cut down Garred's

brother, and afterwards, in revenge for the death of Plowden and Bell, executed 1,500 of the Chief's followers by cutting off their hands and feet.

Dr. Krapf, the missionary, who had given a brief account of his return journey from Tekoonda to Harkîko in 1842, and who had four years previously travelled from Massowah to Halai by the river Hadâs, recommended the third route from Tajûra, already discarded.

M. Munzinger, the French and acting British Consul at Massowah, who had resided for ten years in Northern Abyssinia, reported in January, 1867, that "There are only two roads leading to Northern Abyssinia which are worth close examination, because they alone are practicable to camels :—

"One is by Tekoonda, following the well-known torrent of Hadâs to the foot of the Taranta Mountain, where it turns to the left; then along another torrent to the ascent to Tekonda, which could easily be made practicable for any carriage.

"The other is to Kiaguor." M. Munzinger added that from Kiaguor "the road ascends the hill not practicable at present for camels, but can easily be made so."

M. Munzinger made a reconnoissance of this road to Kiaguor, in January, 1867, at Colonel Merewether's request.

The route mentioned by M. Munzinger to

Tekoonda by the River Hadâs, was the same as that described by Dr. Krapf, mentioned above.

Mr. Salt, the traveller, who had been private secretary to Lord Valentia, and who was subsequently British Consul-General in Egypt, was sent in the year 1805 on a mission to Râs Walda Selassê, ruler of Tigré. Mr. Salt proposed to open up the track leading from Amphilla Bay to the highlands. For the furtherance of his project he despatched his companion, Mr. Coffin, early in the present century, to explore the route—an undertaking which he accomplished at great risk. The death of Râs Walda Selassê, and, subsequently, that of Mr. Salt himself, prevented the further progress of his design.

Mr. Coffin, who, it may be mentioned, lived for more than half a century in Abyssinia, and lately died there, started from Amphilla on the 10th of January, 1810.

After traversing fifty miles of barren and rugged country he arrived at the edge of an extensive salt plain, said to be four days' journey in extent. Crossing half a mile of salt marsh, the surface became strongly crusted, hard, and crystalline, resembling in appearance a rough coarse sheet of ice. The Salt Lake took Mr. Coffin and his party five hours to cross, and the route up to the highlands was over steep and rugged passes.

This route was also travelled by the Jesuit priest, Don Alonzo Mendez, in May and June, 1625. He says:—"Eating very little besides rice we had with us, meeting no town to furnish us with provisions, and the heat so violent that it melted the wax in our boxes; without any shade but that of briars, which did us more harm than good, lying on the hard ground, and drinking brackish water of very ill scent, and sometimes but very little of that," &c.

Subsequently, M. Lefebvre attempted to make a journey from the highlands towards the Salt Plain. He descended to Ficho, a few hours' journey from the plain, to which place the Taltals bring up salt from the lake. The market of Ficho was attended by caravans from Atsbé, Adigerat, Dessa, and Oika-messal, the Taltals only taking the salt as far as Ficho. The Chief of Ficho informed M. Lefebvre that the Salt Lake, named "Alelbad," often changed its shape and place. As he expressed it, "the lake moves." "Often," said the Chief, "on going to a place which the evening before was quite solid, you suddenly break through and disappear in the abyss."

"But what is more frightful," states M. Lefebvre, "is the overflow of the waters; sometimes the lake rises like a mountain and falls again into the plain like a deluge; entire caravans, men and beasts, are

engulphed. There are, however, precursory signs, of which mounted men only can take advantage by flying at the utmost speed of their animals; occasionally, some of them have thus escaped, and it is from them that these terrible details are procured.

"The salt is found in the neighbourhood of the lake, in horizontal beds two inches thick, which are got out with wooden levers; the pieces are then cut into the proper size for sale with little hatchets. A little to the north three volcanoes are found, at the foot of which sulphur is found mixed with salt; from these volcanoes is often heard a dull sound, which the Taltals call the Devil's thunder."

M. Lefebvre was very curious to visit the Salt Plain, but he was told that "an Abyssinian, much more a white man, could not support the heat; the Taltals themselves often fell struck by congestion of the brain." He persisted in undertaking the journey, but before he came in sight of the Salt Plain he, too, was struck down by the sun, and was obliged to retreat precipitately, narrowly escaping with his life. M. Lefebvre subsequently became insane, and was put in chains at Góndar by a chief in rebellion against Theodorus. Consul Plowden effected his release in 1856.

To complete the information obtained from the descriptions given by various travellers, bearing upon the north-easterly routes into Abyssinia, it

only remains to mention last, but certainly not least, the voluminous correspondence and writings of the learned Dr. Beke, who has made Abyssinian affairs his study ever since he first visited the country thirty years ago. It is unnecessary to refer to Dr. Beke's earlier writings, or to the information respecting Abyssinia, or its affairs, he was in the habit of communicating to Government prior to the year 1866, when he started for Abyssinia on a private mission to King Theodorus, bearing a letter from the friends of the captives; for his knowledge of the north-easterly routes, extended by his visit on that occasion, is freely given in the numerous letters he addressed to the Government on his return from his well-intentioned, but ineffectual attempt to soften the heart of the despotic King.

On the 12th April, 1867, Dr. Beke wrote to the English Minister for Foreign Affairs, and the information given in his letter bearing upon the subject in hand may be thus summarised :—

That the readiest access to Abyssinia was from the west coast of Annesley Bay, where the table-land, 8,000 feet high, approaches within twenty miles of the sea-shore.

That Dr. Beke travelled to the edge of the table-land up the valley of the River Hadâs, and discovered that this river falls into the Bay near the ancient city of Adulis.

That Dr. Beke subsequently learned that a far preferable road led to Senâfé, either from the head of Annesley Bay, or from Howâkil Bay further south, which road the Government must have heard of from Mr. Salt.

That if Mâgdala was to be seized by a *coup de main*, another road altogether, that from Raheita in the Straits, should be preferred.

Thus it will be observed, that Dr. Beke did not recommend the route taken by him up the valley of the River Hadâs to Halai, which, with the exception of the lowland portion from Adulis, was the same as that taken by Dr. Krapf, and described by him in 1842; but readily gave up that with which he was acquainted, for a route he had only heard of as leading from the head of Annesley Bay, or from Howâkil Bay to Senâfé.

On the 13th June, 1867, Dr. Beke wrote in condemnation of any route from Amphilla Bay; likewise of the route from Egypt up the Nile. His argument against the adoption of the Nile route was quite conclusive and unanswerable.

On the 25th July, the Secretary of State for India telegraphed to the Governor of Bombay to send a reconnoitring party to settle the route to be adopted; and the telegram was replied to within three days.

Dr. Beke wrote again to the Foreign Office on

the 10th and 14th August; but the officers sent to Abyssinia in September, did not become acquainted with Dr. Beke's latest opinions as expressed in these communications—which were in favour of a route with which he was personally unacquainted, and respecting which he could give no information—until their labours had drawn to a close.

Although Dr. Beke's letters had no influence upon the proceedings of the exploring party, it will not be out of place to give the substance of his communications.

Dr. Beke's recommendations may be summed up as follows, his remarks *in extenso* being too long for insertion :—

In case it might be necessary to march a British army as far as Magdala, or into the interior of Abyssinia, he suggested Senâfé for the encampment of the British force; this post on the highlands being attained either by a route from Adulis up the valley of the Hadâs to Tekoonda, or by the supposed better road from the peninsula of Buré, by the north end of the Salt Plain of Harko.

In case of an alternative plan of endeavouring to seize Magdala by a *coup de main*, with a small force, making forced marches, the route from Raheita to Magdala was to be preferred over that from Tajûra to Shoa.

Thus while Dr. Beke's acquaintance with Abys-

sinia, its people and languages, probably not exceeded by that of any other European now living, may be fully conceded, together with the fact that, for the last thirty years, he has endeavoured, by his learned scientific writings and letters, to create in the minds of his countrymen an interest in that extraordinary land; yet, as respects the march of the British force from the sea-coast into that country,—the ordinary level of which is equal in elevation above the sea to the summit of the St. Gothard Pass over the Alps—he was not in a position, from the want of personal knowledge, to give useful and reliable information. Dr. Beke was not acquainted with the portion of the route from the foot of Shumfaito to Tekoonda, and from thence to Senâfé, or with the routes between Buré and Senâfé. He was misinformed as to the existence of water in the bed of the Hadâs, "all the way down to close to the sea-shore," as it was afterwards discovered that no water existed between the base of the mountains at Hadôda, on the Hadâs, and the watering-place of Zulla, at Mulkuttoo, a distance of at least fourteen miles, the whole width of the lowlands at this point.

These observations conclude that portion of the narrative which relates to the information in possession of Government, obtained from their own archives, and from the writings and suggestions of private individuals acquainted with the country.

The proceedings of Government through their own officers must now be described.

On the 20th March, 1867, Major-General Sir W. M. Coghlan, of the Royal Artillery, who had for many years held the post of Political Resident and Commandant at Aden, and who was conversant with the localities and political affairs of the tribes occupying the countries adjacent to the Red Sea, submitted to the Home Government a matured scheme for an Abyssinian Expeditionary Force. In the preparation of his scheme, Sir William Coghlan stated he had availed himself largely of the assistance of the Rev. G. P. Badger, a gentleman well known to Government as an Oriental scholar, and who, from his intimate acquaintance with Orientals, had rendered signal service to the country during the Persian war.

Sir William Coghlan proposed, that the Expedition should not consist of less than 10,000 men of all arms. After fully discussing the political aspect of the question which led him to form the estimate of the force which, in his opinion, would be necessary to effect the object in view, he proceeded to say :—

"The next subject of importance is the route to be adopted, in order to reach the high table land of Abyssinia. Of these there are several :—"

Sir William Coghlan's remarks upon the routes

are so far-seeing, and judicious, that no apology is needed for quoting them in full :—

"First, that by Tajourra (opposite to Aden) to Shoa, which has been recommended by Dr. Krapf. But the road is rough, desolate, and barren, and in several parts almost destitute of water. The French traveller, M. Rochet, who traversed it four times, describes it thus :—'Je crois pouvoir dire . . . . . il y a peu de voyages plus fatigants pour l'esprit et pour le corps, plus perilleux à la fois, et plus monotone, que de parcourir les déserts des Adels.' Moreover, it is by no means the nearest route to Begemder, the head-quarters of Theodorus; and although the Shoa people would undoubtedly be ready to co-operate with the British, and might furnish a respectable contingent, nevertheless, as a wide extent of country interposes between them and Begemder, inhabited by warlike Gallas, who would be as jealous of Shoa ascendency as they may be disaffected towards Theodorus, by contracting any alliance with the Shoans, we may run the risk of evoking the antagonism of their Galla rivals, and thereby dispose the latter to gravitate towards the Royal party.

"The nearest route is unquestionably by Amphilla (Hanfila), situated on the western shore of the Red Sea, opposite to Hodeida; but Moresby describes it as 'one of the most wretched places on

the coast. The village, which hardly deserves the name, consists of six miserable huts, close to the sea, on the verge of a sandy plain, and does not appear capable of furnishing any supplies.' Consul Plowden calls it 'a bad roadstead, and a worse landscape; very unfavourable to the shipment of goods, with little water, and that of a bad quality.' Another drawback, which he mentions, is the fierce tribe of the Taltals, who occupy the intermediate region between the coast and the highlands in the interior, and of whom we know scarcely anything beyond their treachery and barbarity. The sole advantage of vicinity, therefore, is quite neutralized by the difficulties attending that route.

"Of the remaining, two only called for notice, as any others that might be suggested are comparatively unknown, and therefore inexpedient on an occasion like that under consideration, when our object should be less to explore new lines of access than to take advantage of those which long experience has proved to be the most eligible.

"The two routes above referred to are,—that by Zulla in Annesley Bay to Halai, and that towards the same point from Massowah. The former is undoubtedly the nearer road, and was in ancient times the principal approach to Tigré, the first Abyssinian province on the high tableland. It is but very little frequented at present; hence it is

not likely to furnish supplies in any considerable quantity. Another drawback is the scarcity of water in the level country round Zulla. Still, the route is so much nearer to Tigré that it would be desirable to obtain, if possible, more detailed and reliable information respecting its eligibility for an invading army.

"Unless that route, however, is found to possess some peculiar advantages, the other, *viâ* Massowah, will probably be found the most eligible. It is the ordinary cafilah road to and from the interior, and Consul Plowden calls it 'the most practicable' and 'the only one desirable.' The country for fifty or sixty miles inland is inhabited by the Shihos, who are accustomed to furnish guides to all travellers, and are nominally under the jurisdiction of the Governor of Massowah. The lofty mountains and narrow defiles within the above-named district are in their undisputed possession, and as the passage is regularly traversed by heavily laden mules, it cannot present any serious obstacles to the impedimenta of an army. The Shihos, though a powerful tribe, have no fire-arms; but instead of opposing, there is every reason to believe that, for adequate remuneration, they would be most ready to facilitate the march of our troops through their territory.

"Massowah has a good harbour, and being the principal emporium of trade in that quarter, offers

facilities for obtaining supplies which would be looked for in vain at any other point on the coast. The existence, moreover, of a regular government on the island and adjoining mainland is another important consideration, presenting, as it does, perfect security for disembarkation, for the establishment of a depôt, and for co-operating with the movements of the expedition generally.

"As Massowah and the neighbourhood form a part of the Turkish dominions, subject to the immediate jurisdiction of the Viceroy of Egypt, it would be requisite to procure the Imperial sanction for the passage of our army through the neutral territory, and for the use proposed to be made of the aforesaid district. It would be politically unadvisable either to ask for, or to accept, any further concession, beyond a general order to the local authorities to afford such succour as may be consistent with a Sovereign's rights, and the maintenance of Ottoman neutrality."

Although Sir William Coghlan advocated the adoption of old known routes in preference to the exploration of new ones, his scheme embraced, as an essential preliminary arrangement, that a political officer, with a staff comprising an officer from each branch of the army, should be sent in advance of the Expeditionary Force to make full inquiries and investigation concerning routes, resources of the

country, political and other matters. The highest military authority in India, Sir William Mansfield, pronounced Sir William Coghlan's "Preliminary arrangements" as the most valuable portion of his memorandum.

When the despatch of an Expeditionary Force to Abyssinia came under consideration, Sir William Coghlan himself was looked upon as an officer well qualified to command the force and conduct the expedition, the Rev. George Percy Badger being attached to the expedition as Political Agent and Interpreter. But the Home Government, in compliance with the wish of his Royal Highness the Duke of Cambridge, finally appointed Sir Robert Napier, Commander-in-Chief at Bombay, to the command of the force to be despatched from the troops under his command, the Government conferring on him, at the same time, uncontrolled political authority.

It was a fortunate circumstance for the Abyssinian captives that Colonel Merewether, while Political Resident at Aden, had, from the commencement of their imprisonment, taken such a lively interest in their unfortunate condition. His concern for their welfare was not lessened, when his own First and Third Assistants, Mr. Rassam and Lieutenant Prideaux, together with Dr. Blanc, who was on the Medical Staff at Aden, were added to the list of Theodorus's captives.

It is not necessary to relate here the steps which had been taken by Colonel Merewether, from so early a date as April, 1864, with a view to the release of the prisoners, excepting that they were characterized by his well-known energy and judgment.

Colonel Merewether, having occasion to visit Massowah to assist Mr. Flad on his return journey from England to the King, and to arrange for the transmission of the artificers and presents which Theodorus had desired, but which were not to be forwarded until he had complied with the conditions contained in Her Majesty's letter, foreseeing that conciliatory policy would be of no avail, and that coercive measures would become inevitable, determined to lose no time in commencing an investigation into the important subject of a practicable route to the highlands. Colonel Merewether made excursions into the neighbourhood of Massowah, visiting the plain of Ailat, 27 miles west of that port, which he found covered with verdure, and, in his opinion well adapted for the location of a large body of cavalry on first landing, wood, water, forage, and meat being plentiful. The direct road from Ailat into Abyssinia, he was informed, was not good, but a better and one suitable for laden camels passed eight miles south of the plain, and entered the highlands by Kiaguor. M. Munzinger, the acting

British Consul, investigated this route for Colonel Merewether as mentioned above, and accompanied him down to the head of Annesley Bay, where they landed. Colonel Merewether's investigations at this point were absurdly interrupted by a herd of elephants feeding close to the sea-shore, two of which he shot. From inquiries made in the Bay he heard of the old abandoned Greek caravan road from Adulis to Senâfé, but which, according to Dr. Beke, was from Adulis to Halai. Also of two routes formerly used from Amphilla Bay to Adowa, and from Edd further south to Sôkota.

In February, 1867, on his way up from Aden to Massowah, Colonel Merewether had called in at Amphilla Bay, and finding it better suited for the debarkation of troops, and better provided with water than had been reported, he thought it would be worth while having the route to the highlands investigated by M. Munzinger; particularly as Amphilla Bay was so much nearer Tigré, the northern province of Abyssinia, than Massowah.

In April, 1867, Colonel Merewether, accompanied by Captain C. J. Merriman, R.E., Executive Engineer at Aden, and Surgeon James, made a reconnoissance to the Agametta plateau, situated 29 miles from Massowah, and elevated 3,200 feet above the sea. The plateau was suitable for an encampment of 10,000 men, with running water, wood, and grass

plentiful. This was useful information in connection with the Massowah route, as it would become of the utmost importance to get the troops away from the intensely hot shores of the Red Sea.

People who live in a temperate climate have little conception of what this heat is. The "Warmth-Equator," or line of greatest heat, which does not coincide with the Equator in consequence of the irregular configuration of the land and sea, passes out of Africa near Massowah, and following the Red Sea nearly down to the Straits, crosses Arabia above the peninsula of Aden, which has been occupied by the British since 1839. Mr. Rassam, who was detained at Massowah for fifteen months, states that the heat there was so great, that the Aden climate, which is bad enough, seemed a paradise compared with it. The hot season in these regions commences at the latter end of March, and lasts till the end of October. Colonel Merewether, who was at Massowah in July, says, "The heat here is very great, proving the utter impossibility of bringing troops at this season of the year. Even if they were only detained a few days in it, perfect prostration and disorganization would be risked." Calling at Tajûra, on his way down to Aden, he speaks of that horrible sea residence as follows:—

"The heat at Tadjoora (Tajûra) was very great, as bad, if not worse, at night than by day. It

is surrounded on all sides but one by volcanic hills tumbled about in the most confused manner, which, baked by the sun in the day, give out intense heat at night. Though we were two miles out at sea, the wind came off the shore as from a glowing furnace."

On the 29th April, 1867, Colonel Merewether received intelligence of a division among the rebels in Northern Abyssinia. A powerful rival, by name Kâsa, had risen up against his master, Wakshum Gobazê, in Tigré. He feared that this state of affairs would, if operations were decided on, render the passage of a British force through the disturbed province of Tigré unadvisable. This disposed him to think that the best way of approaching Begá-meder and the Emperor, would be by landing the troops at Amphilla, and marching through the Azubo Galla country to the neighbourhood of Lake Ashangi, and then, entering Abyssinia proper through Lasta and Wadela, both of which districts were in active opposition to the Emperor. Of this route, however, which had never been traversed by any European, nothing was known beyond what could be collected from native sources.

Towards the end of July the extreme forbearance of the British Government towards Theodorus began to give way. Every conceivable means for gaining his friendship and good-will had been

attempted and failed. It became evident to all, as it had long been to the British political officers at Aden and in Egypt, that the King was utterly wanting in true faith and sincere dealing, and that no conciliatory measures would induce him to let the prisoners go.

Although the final decision of Government, as respects the despatch of an armed force to invade Abyssinia, was not arrived at, as stated by the Ministry, till the 19th August, 1867, to save time, in case the expedition was determined upon, the Governor of Bombay was directed by telegram, on the 25th July, to send officers to make inquiries on the spot. The Bombay Government summoned Colonel Merewether to Bombay, but he considered it advisable to wait a few days for the arrival of M. Munzinger's report of his journey from Amphilla before proceeding to India.

M. Munzinger commenced his perilous journey at the hottest season of the year. He crossed the Salt Lake — already mentioned as having been traversed by Mr. Coffin in the year 1810, and by Don Alonzo Mendez in 1625—and returned in safety to Massowah. His report was considered to settle in the negative the question of any route so southerly as that from Amphilla being chosen; but his description of the country at a place called Ragoolé near the base of the mountains, situated

on the banks of a running stream, was painted in such glowing colours as to give rise to hopes that a more northerly route, clear of the Salt Lake, which might pass through Ragoolé, would be found practicable for the expeditionary force.

Thus, the question of the point of debarkation for the force became narrowed to Howâkil and Annesley Bays and the port of Massowah.

Nevertheless, the route from the Red Sea from the above-mentioned eighty miles of line of coast, which could be made practicable for an army with its materiel to cross the lowlands and penetrate the mountainous frontier of Abyssinia, had yet to be determined.

CHAPTER II.

PREPARATIONS.

Officers warned for Field Service—Colonel Merewether's Arrival at Bombay—News of the Prisoners—Mr. Flad's Interview with Theodorus—The King Harassed by Rebels—His Cruelty—Critical Position of Prisoners—Supineness of the British Government—Menelek, King of Shoa—His Escape from Magdala—His Letter to the Queen—His Apologies—A Reconnoitring Field Force Ordered—Composition of Field Force—Objects to be Attained—Commander-in-Chief's Memorandum—His Foresight—Appoints a Committee of Officers of the R. F. F. to Decide upon the Place of Debarkation, &c.—Memorandum of the Governor of Bombay—Effect of Northerly Winds on the Bay—Protection, how afforded—Season for Active Operations—South-west Monsoon—Departure of R. F. F. Postponed—The Three Steamers.

EARLY in the second week of August, 1867, certain officers of the Bombay Army were warned to hold themselves in readiness to proceed in a few days on field service to Abyssinia. They learnt, at the same time, that it was not certain they would have to go at all, as the Home Government had not finally determined upon the invasion of Abyssinia. The decision of the Ministry was awaited with much excitement by those individually concerned, and

with curiosity by the few who were necessarily acquainted with the affairs of Government. Colonel Merewether was expected to arrive from Aden about the 18th August with the latest news of the prisoners. As previously stated, he delayed his departure a few days in order to obtain M. Munzinger's report of his journey from Amphilla; consequently he did not reach India till towards the end of August. Colonel Merewether's news of the prisoners at Magdala was up to the 19th June. Mr. Rassam had received letters from Mr. Flad from Debra Tabor, near the King's camp, dated the 16th May. Mr. Flad gave an interesting account of his interview with Theodorus after his return from England, whither he had been sent by the King. After the Abyssinian monarch had made up his mind to detain the British Mission and the Consul, he had despatched Mr. Flad, one of the German Missionaries, with a letter to Her Majesty, requesting to be supplied with skilled artizans and machinery. To ensure Mr. Flad's return, the King had retained his wife and children as hostages. Mr. Flad, who had been obliged to return to Abyssinia without the workmen, had conducted himself with great propriety and boldness before the Monarch, who had behaved very badly. He was in a bad humour at having been thwarted in his views. The artizans and machinery were ready at

Massowah, but were not to be sent up to the King until the prisoners were first released; and to this arrangement Theodorus would not consent. Mr. Rassam stated that the King's power was reduced by the desertion of a portion of his soldiery. The communication between the King's camp near Debra Tabor and his garrison at Magdala had been closed by the rebels; so his Majesty was not likely to favour his captives with a visit for some time. Harassed by the rebels, and disappointed in his hopes of obtaining possession of another body of workmen, Theodorus vented his rage on his own soldiers and subjects. Colonel Merewether considered the position of the Europeans at Debra Tabor, consisting of Mr. and Mrs. Flad, and Mrs. Rosenthal, with their children, the German lay missionaries, the hunters of the Duke of Saxe-Coburg, and the two Frenchmen, Bardel and Mackerer, as most critical.

In transmitting from Aden to the Secretary of State for Foreign Affairs the information he had received from the prisoners, Colonel Merewether added:—

"Dr. Blanc's present letter, as well as all previous correspondence, will have shown that in Abyssinia the opinion has become very general that England is its inferior in power, and cannot resent insult. I regret to say that that opinion is not confined to

Abyssinia; and though not so openly expressed, there is undoubtedly amongst the people in the neighbourhood here a feeling of surprise at the long continued endurance of the British Government."

Shortly before leaving Aden, Colonel Merewether had received a letter and presents for Her Majesty from Menelek, King of Shoa. Shoa, the southernmost province of Abyssinia, had been conquered by Theodorus, who put the youthful prince in chains at Magdala, from whence he had made his escape two years previously to the arrival of his messenger at Aden. Menelek had been eleven years absent from his kingdom, and was the grandson of Sâhela Selassê, who was visited by Sir William Harris and his mission. Menelek, in his letter to the Queen, besought Her Majesty's friendship, and apologised for his grandfather having been so ill-advised as to have regarded with coldness the advances made to him by the British in the year 1841.

On Colonel Merewether's arrival at Bombay, where he was anxiously expected, Sir Seymour Fitgerald's Government issued their final orders for the formation of a small Reconnoitring Field Force to be despatched to the Abyssinian coast with as little delay as possible. It was considered a matter of the utmost importance that the necessary exploration of the country should be completed before the

commencement of the season, when active operations could be undertaken.

Colonel W. L. Merewether, C.B., Political Resident at Aden, who had gained his laurels in Scinde, having served for a great many years at the right hand of his friend and renowned chief, the late Major-General John Jacob, whom he succeeded in his post as Political Resident on the Scinde frontier and Commandant of the Scinde Horse, was appointed to the command of the Abyssinian Reconnoitring Force, which was composed as follows:—

Colonel W. L. Merewether, C.B., Political Resident, Aden, in command; Lieut.-Colonel R. Phayre, Quartermaster-General, Bombay Army; Lieut.-Colonel H. St. Clair Wilkins, R.E., Commanding Engineer; Major R. Baigree, Assistant Quartermaster-General; Major Mignion, Assistant Commissary-General; Captain W. W. Goodfellow, R.E., Field Engineer; Captain B. H. Pottinger, R.A., Deputy Assistant Quartermaster-General; Lieut. K. A. Jopp, R.E., Assistant Field Engineer; Lieut. F. J. Mortimer, R.H.A., Transport Train; Lieut. Hennell, 18th N.I., Transport Train; Staff Surgeon J. Lumsdaine; Staff Assistant Surgeon W. T. Martin; Captain Hewett, I.N., commanding *Coromandel;* Lieut. Dawes, I.N., Harbour Master; 100 Rank and File, 21st Regt.

N.I. (Marine Battalion), Subadar Shaik Nuthur, commanding; 40 Troopers, 3rd Bombay Cavalry; detail Bombay Sappers and Miners; Quartermaster-General's native Guides; Commissariat Parsee Inspectors; Parsee Public Works Overseer; Lascars and camp followers; 149 mules for carriage, twenty-two officers' horses, and forty troop-horses.

The objects for the attainment of which the despatch of a small Reconnoitring Force in advance of the Expeditionary Force had been determined upon, were thus described by the Commander-in-Chief himself:—

"*Memorandum by the Commander-in-Chief of the Bombay Army.*

"September 6th, 1867.

"The expedition will consist of a force that may be stated in round numbers: 4,000 British, 8,000 native troops; with at least an equal number of camp followers, and 25,000 head of cattle of various kinds.

"All of these cannot arrive at once, but it will be well to assume that one-fourth of the number may arrive together or within very short intervals.

"It is probable that as many as 150 transports may be assembled at one time.

"*Points requiring attention.*

"A good harbour or roadstead.

"A good shore for landing.

"A plentiful supply of good water as near the beach as possible, and a report, as far as ascertainable, of its quality at all seasons.

"A convenient, healthy locality, for the depôt of stores on first landing, to be called Post No. 1, with room for the sheds, encampment of troops, picketing of horses and other animals, immediately after their being landed, and pending their removal to a greater distance.

"A suitable situation for the camp of the troops to protect the depôt on shore.

"A position, which will not interfere with the encampment of the troops, for the encampment of the native followers who will probably collect and remain during the expedition, as well as those who may merely halt there on their way with the force.

"A position for collecting and organizing the land transport for the force as it is gradually landed, where large numbers of cattle can be picketed, fed, and watered; also herded for pasture in the day.

"It is certain that there will be required some protection for the cattle thus collected up to the time that the advanced brigade is established at a Post No. 2 on the highland, and even subsequent to

that time, and that a force of perhaps a regiment of cavalry, and one of infantry, may remain there for some weeks.

"The nearer that this spot is to the landing-place, the greater will be the facility of supplying all stores and equipments.

"It is also to be taken into consideration that, if the above spot should be found near the coast, it may be necessary to seek for an encampment for the British troops at a higher elevation, in case they should be detained for some time before it was found convenient to move on to the table-land.

"An elevated healthy spot should be looked for; the situation of this place would depend upon the existence of abundant natural forage, water and salubrity.

"The foregoing conditions are very important, if not indispensable.

"It is to be hoped the reconnoitring party may succeed in obtaining them at a point of the sea-shore which will give the shortest approach to the healthy table-land, where Post No. 2 may be established.

"As far as it can at present be determined, it is proposed that an entrepôt for provisions shall be formed, and a brigade stationed there, probably until the return of the expedition.

"Much more value is attached to the attainment of a convenient point of debarkation, and of an easy

march to the healthy and cooler highland through a tract supplied with water and forage, than to any saving of distance by striking the probable line of advance a little further on in the direction of our march to the capital of Theodorus.

"There will be little value in a gain of distance which shall detain our troops in the low land, as it is not proposed to take any but pack carriage beyond Post No. 2, up to which point, however, it is proposed to open a cart-road for artillery and stores, as soon as it may be possible.

"It is to be remembered that it will be necessary to establish and provision several posts of considerable strength, to maintain the communications, and that during the passage of the force the connecting roads will be improved. It would be inconvenient to expend this labour on a line which would be untenable in the hot weather, and to be liable to shift the connecting posts during the operations.

"With reference to the communication between the landing-place and the highland, it will probably not be difficult to find a track which, taking advantage of any natural facilities of the country, may be made passable for wheeled carriages with moderate labour, while a more direct route might be found for pack carriage.

"After the foregoing and general points have

been considered and disposed of, the officers of the Engineers and Quartermaster-General's department should make a rapid reconnoissance of the country for a space of from five to ten miles radius from the landing-place, according to the nature of the ground, and prepare such sketches of the routes as they can make without too great a detention.

"It is, of course, desirable that the reconnoissance should be extended as far into the highland of Abyssinia as may be practicable, but in this matter Colonel Merewether will be guided by his knowledge of the country, so as not to compromise the safety of any of his party.

"It is desirable that the first examination should be made at Annesley Bay, because it is the nearest point, and there will have been less time for the proceedings of the party to attract attention in the country.

"It is necessary that some one well acquainted with the different descriptions of forage should accompany the expedition, to report on the quality of that which may be met with, sufficient samples of which might be brought down to the landing-place.

"R. NAPIER.'

Looking at this memorandum by the light of the events of the campaign as they subsequently

happened, it must be considered as a remarkable document. Comprehensive as these conditions appeared to be, taking into consideration the nature of the country to be explored, they were still not so exacting as to prevent their being mainly complied with. Probably no one but the Commander-in-Chief himself thought that the objects laid down were attainable; at least the idea of opening a road for wheeled traffic up the mountain passes was not entertained in India. Notwithstanding that Sir Robert Napier stood perhaps single in his hope of opening a cart-road to Post No. 2 on the highlands, yet the feat was actually accomplished, and was attended with the most beneficial results, time and labour being both saved.

It is true a plentiful supply of good water was not obtained on the beach, for the simple reason that it does not exist anywhere on the coast; but a plentiful supply was obtained "as near the beach as possible," namely, at Komaylé, twelve miles off. With the exception of the pasturage near the beach, which, like the water, does not exist anywhere in these regions, every condition, as laid down by the Commander-in-Chief, was complied with.

The following additional Memorandum was issued by his Excellency the Commander-in-Chief:—

"*Poona, September* 14, 1867.

"A Committee will be formed as follows :—

"*President.*

"Lieutenant-Colonel Merewether, C.B.

"*Members.*

"Lieutenant-Colonel Phayre, Quartermaster-General;

"Lieutenant-Colonel Wilkins, Royal Engineers;

"The Senior Naval Officer;

"The Senior Medical Officer;

to decide on the point of debarkation, after weighing fully all the information they may obtain, and the reports of the several departments which form the expedition.

"For deciding all points not connected with the port and landing-places, the same Committee will be formed, with the exception of the naval member.

"The following points of information should be obtained, if possible :—

"The nature of the supplies, description of grain, natural forage for horses and camels in the country between the port and Antalo, also in Lasta and the Zabul.

"The arrangements that may be practicable to engage the services of any of the tribes on the coast, for securing communications, and the protection of forage parties or cattle.

"The nature of any arrangements that are practicable for securing the transport of supplies by local carriage from the coast, for such distance inland as may be safe for such description of carriage.

"Every information of the nature and extent of carriage obtainable for purchase or hire, and how any obtained will be equipped with gear and drivers.

"With reference to the respective duties of the officers of Royal Engineers and the Quartermaster-General's Department, it may be observed that the more especial duties of the Royal Engineers will be the capabilities of the shore for the construction of landing piers, floating wharves, shelter of all kinds, wells for water; the military value of any position selected as regards defensive facilities or security from approach; the security in position of the selected posts for securing the communications; general reconnoissance.

"The Commander-in-Chief relies on the cordial and harmonious working of all officers to subdivide the general work to the best advantage.

"The Commander-in-Chief particularly desires every officer connected with the reconnoissance to be strictly guided by the instructions and wishes of Lieutenant-Colonel Merewether, who is responsible that no unnecessary risks are run.

"The strictest discipline must be maintained amongst the camp followers.

"R. NAPIER,
"Lieut.-General, Commander-in-Chief."

The Governor of Bombay in Council issued a memorandum on this occasion, from which, as relating to the subject in hand, the following extracts are taken :—

"*September 15th*, 1867.

"The reconnoitring party will have a duty cast upon them beyond that which was at first contemplated when it was proposed to send a small force into the country to report on the best landing-place, to inquire into the best route which an invading army could take, and the resources which the country itself could provide for its transport and maintenance.

"The first point that will have to be attended to will be, that the point selected for disembarkation must be so situated as to give facility for approach to vessels drawing a considerable quantity of water, with good anchorage and natural protection; and, what must not be forgotten, with ample space where a considerable number of vessels of large size can lie during the time they are awaiting discharge. It is possible that, about the time of the arrival at Head-quarters, there may be more

than a hundred sail congregated at or near the point of disembarkation, and the selection of a harbour or roadstead for such a force, if such exist at all, will be a matter of great difficulty.

"The officers of the Marine who accompany the party will, if a point be found which is favourably circumstanced as regards extent, holding ground, protection from storms, &c., have to take the necessary soundings to buoy the approach if required, and to establish such land-marks, &c., as shall enable vessels to reach the anchorage without danger.

"There should be, if possible, several points of landing, at sufficient distance from each other to avoid crowding, where, if facilities exist for the purpose, temporary jetties of stone should be constructed of sufficient width for the landing of heavy stores. It is proposed, also, to provide a sufficient number of lighters that may be planked and lashed together, to form floating piers. Steamers and barges will be provided for the disembarkation.

"It would be an object, therefore, not only to secure a sufficient space for the transports, but, if possible, a spot where there would be a sufficient extent of shore to provide facilities for constructing several landing-places, so as to permit of the disembarkation of men and stores at several points at the same time.

"The position of Annesley Bay—which, in the opinion of his Excellency, should be the point first examined—appears to offer great advantages; but the attention of the naval officers should be directed to the north, from which quarter strong gales are often experienced, and the position of a fleet, under such circumstances, in a deep bay extending for some miles inland, and with no exit but to the north, might be one of extreme risk. Even if there should be no probability of danger, still a continuance of north winds may make disembarkation difficult. Accurate inquiries must, therefore, be made as to the prevailing winds at the period of the year when it is proposed the disembarkation shall take place, and their effect on the waters of the bay.

"A sufficient strength of Sappers and Miners and of coolies will be despatched in about three weeks from this time, with a guard for the animals that about that time will begin to arrive or be collected, and active preparations should be made for the reception of the forces which are to follow. For this purpose the materials for six large commissariat sheds will be sent from Bombay, as also a tramway and waggons to be used for the debarkation of stores, and a large supply of miscellaneous timber."

Although in anticipation of future events, it may be mentioned here that the difficulties correctly

foreshadowed in the above memorandum by the Governor of Bombay, as likely to arise from the prevalence of northerly winds in Annesley Bay, were considerably modified by the protection afforded to the bay by the island of Dissee situated at its mouth, and finally overcome by the employment of a large number of steam-vessels as transports. Also by constructing the piers so as to obtain smooth water on their south sides, the piers themselves acted as breakwaters.

The season for active operations in Abyssinia commencing in November, it was a matter of great importance that the reconnoitring party should leave Bombay as early as possible. The south-west monsoon, however, which sets in at Bombay early in June and continues with unabated violence until September, rendering the voyage to Aden extremely difficult and at times hazardous, combined with the intense heat which prevails in the Red Sea from April to the end of October, presented difficulties not easily to be surmounted. The 20th August was first fixed upon for the departure of the party, but abandoned on the representation of the Superintendent of Marine. The 10th September was then named; but, on the 8th, the superintendent again represented that the monsoon was still in full force, and that horses and baggage animals would fare very badly in such heavy seas as the mail-steamer,

which had just arrived, reported she had met with. Such importance, however, was attached to the early departure of the force, that a delay of five days only was granted, and Sunday, the 15th September, saw the whole party on board their allotted vessels.

The *Euphrates*, iron steam ship, of 650 tons and 135 horse-power, Captain Avern in command, which had been taken up from a private company by the Bombay Government, carried nearly all the officers of the party, together with eighteen horses, the company of the Marine Battalion, the detail of Sappers and Miners, Lascars, &c.

The S.S. *Coromandel*, of the Bombay Marine. commanded by Captain Hewett, late Indian Navy, conveyed two officers, the troopers of the 3rd Bombay Cavalry, and their horses, together with 149 mules. The small S.S. *Scinde* accompanied as a despatch boat.

The departure of the small Reconnoitring Party on their novel expedition occasioned much interest at Bombay; and the steamers being delayed throughout the day for despatches, numerous friends of those on board came to bid them farewell, and wish them success. Brigadier-General Russell, commanding the Bombay Garrison, paid his final visit of inspection in the evening, and Colonel Merewether arrived on board, late at night, with the missing despatch.

CHAPTER III.

VOYAGE.

Reconnoitring Party leaves Bombay—South-west Monsoon—the *Scinde* puts back to Bombay—Plan of the *Euphrates*—Flush Deck System—Occupation during Voyage—Works on Abyssinia—Proposals of Private Individuals—Rough Weather—Arrival at Aden—The *Coromandel*—News of the Prisoners—Wakshum Gobazê—King of Shoa—Theodorus—Mr. Flad—Theodorus' Army—His Cruelty—Heat at Aden—Loss of Mules—Suez Canal—British Possessions in the Red Sea—Fortifications of Aden—The Aden Crater—Municipal Institutions—Aden Governors—Native Estimation of Aden—Water Supply—Aden Tanks—Size of Crater—Site of Town—Antiquity of the Extinct Volcano—Hot Season—Menelek's Letter and Presents for the Queen—Her Majesty's Reply—Menelek's Character—Theodorus' prestige—Departure from Aden—Contretemps—Perim Island—Lighthouses—First Sight of Abyssinia—Red Sea Islands—Narrow Channel—The *Euphrates* runs on a Coral Reef—Escapes from her Dangerous Position—Arrival at Massowah—Duration of Voyage—General Baird's Expedition in 1800—Navigation in 1800 and 1867—General Baird's Occupation of Perim.

THE three steamers left Bombay harbour at dawn, on the 16th September, 1867. No sooner was the outer light-ship of the harbour cleared, than the *Euphrates* commenced pitching heavily, and by night it was very clear to all on board that the

South-west monsoon was still blowing with full force, and what was worse, dead ahead. The severity of the gale at Bombay after the departure of the expedition, which continued unabated for several days, caused, we heard, considerable anxiety, as the steamers had on board upwards of two hundred horses and mules, on whose well-doing the success of the explorers so much depended. The *Euphrates*, on board of which were the officers of the party and their horses, the Marine Battalion and Sappers, lost sight of the other steamers after leaving the harbour; but the *Coromandel*, with two officers, troopers, troop-horses, and transport mules on board, either kept in company with the despatch boat *Scinde*, or fell in with her again on the second day, when the latter, unable to face the gale in her teeth, and having expended her fuel, was obliged to put back to Bombay.

The *Euphrates*, though pretty well freighted, and having her decks choked up with bales of compressed hay, upon which the Lascars and followers remained perched during the voyage, behaved admirably, and made very fair weather of it. Most of the natives experienced the usual effects of a rough sea voyage, but the officers of the party, with one exception, proved themselves tolerable sailors on this occasion, in spite of the perpetual violent motion to which they were subjected.

The *Euphrates*, though small, proved a most

comfortable ship. She had been formerly employed as a packet-ship on the coast of India. It was owing to her poop deck, containing cabins and saloons, that she was comparatively comfortable and airy. The ventilation of passenger steamers built on this plan is far superior, in my humble opinion, to that of the flush deck, which doubtless has its advantages, as far as sea-going properties and the capacity for stowage are concerned.

The rough weather we fell in with prevented the voyage from being monotonous, and most of the party suffering from a strong determination of active service to the brain, employed their time in reading up the country of Abyssinia, and in frequent vain endeavours to master the equilibrium of forces as applied to rolling bodies on the deck of a steamer during a gale. The works of Bruce, Salt, Sir William Harris, Dr. Beke, Mr. Mansfield Parkyns, the prisoners' letters, and the Parliamentary Blue-Book of Abyssinian affairs up to date, were all eagerly read. All were found interesting, particularly Mr. Mansfield Parkyns' and Dr. Beke's, the former, owing to the minute detail into which he enters in describing the manners and customs of the Abyssinians; while Dr. Beke's extensive acquaintance with the country, and his intimate knowledge of the political affairs of the people during the last thirty years, made his writings very acceptable.

Of all the astonishing things that continually happen in the world, not the least so were the proposals made to Government by private volunteers, offering to sacrifice themselves for the good of their country, and the release of the Abyssinian captives. It was difficult to determine the motives which must have actuated this heroic band of devotees. It is true, faint glimpses of objects other than the welfare of the unhappy Magdalites occasionally peeped forth, when, as the condition of martyrdom, provision for their "poor wives" was, in terms betokening anticipated bereavement, insisted upon; but on the whole the majority of the offers may, perhaps, be fairly ascribed to Anglo-Saxon energy and love of enterprise. Selfish motives were doubtless absent from the greater number of these would-be martyrs, whose only desire was to take the chance of a great "success," or "die in the attempt."

But the marvel ends not here, for each individual had his own peculiar method of working upon the treacherous descendant of "Solomon and the Queen of Sheba," by the adoption of which he felt assured of success. Some had more than one plan, and one gentleman had five, one of which, of course, could not fail to prove successful.

It must be for ever a matter of regret, that the individual who proposed to visit Theodorus as an

"acrobat, medicine-man, grave reader of the stars," and "laughing merry-andrew," to which he added the accomplishments of a spiritualist and mesmeriser, should not have had a fair chance of saving the British taxpayers' pocket. It would not, perhaps, have been the first occasion when a British Envoy with certain objects in view has gained his point by "playing with the children" and "admiring the women, no matter how ugly." *

The modesty of some people is indeed wonderful. One gentleman, a doctor—whether of Divinity, Law, or Medicine, is uncertain—understanding that Government purposed sending an armed force to Abyssinia, proposed himself, if not as Commander-in-Chief, which his communication leaves open to doubt, at least as negociator, with the force at his disposal. Another volunteer, a military man holding the rank of Captain, proposed himself for the command of an Expeditionary Force consisting of three regiments of Cavalry and three troops of Horse Artillery; while a third, being sure of succeeding "brilliantly," reproaches the Minister just retired for not having selected him as head of a military mission.

From the 16th to the 23rd September the *Euphrates* experienced unremitting rough weather, the strong head-winds and rough sea causing the

* *Blue Book.*

vessel to labour heavily. The horses being fortunately on deck did not suffer so much as might have been expected. They got fresh air, which is not attainable between decks in the tropics; and being tightly wedged together with round timbers between them, their head and heels tied, and with bars to rest back against, although kept standing during the voyage they could not roll far, and the seas which frequently washed over them did them more good than harm.

On the ninth day of the voyage, having advanced nearly a thousand miles on the way, the weather became much calmer, with the wind on the port beam. The temperature of the atmosphere, however, which had been tolerably cool for the season of the year, now rose with the fall of the wind and sea, and was felt to be oppressive; and the heat increased to a very disagreeable degree as we approached Aden.

Aden, distant 1,600 miles from Bombay, was made at 8 P.M. on the eleventh day; and on rounding the peninsula into the Bay, all were delighted to see the funnel of the *Coromandel* smoking away fifteen or twenty miles astern. The *Coromandel* was said to be the fastest steamer of the two, but that such a voyage should have come to a termination, approaching a dead heat, there being only two hours' difference between the arrival of the vessels,

is sufficiently surprising, though not uncommon in the old days of sailing round the Cape, with the East India Company's China ships.

Anchoring in the harbour, Colonel Merewether was received by his assistants, who gave him six weeks' later news of the prisoners than he had carried with him to Bombay. Mr. Rassam, whose latest communication bore date the 27th July, stated that he had given up all hope of getting out of the country through the aid of Wakshûm Gobazê, of Lasta, and the rebels; also, that the young King of Shoa had sent to Magdala to say that he intended capturing that fortress, of which boast Mr. Rassam gave his opinion that the King was a youth incapable of carrying out his intentions. Theodorus had sent to inform Mr. Rassam that he would be at Magdala in four or five days, but Mr. Rassam did not expect him before the middle of September, unless he left everything behind him, and came with only a few followers. Mr. Flad, who was with the King, had been unable to send down any letters to the coast, excepting through Magdala. His news, dated up to the 11th July, was to the effect that, although the King's soldiers were deserting, he had still with him an army of 10,000 men. The King had said, "If they don't come and fight for Mr. Rassam, I shall defy them and despise every white man;" and again, "If they don't come now and fight for their

Mr. Rassam, I shall keep him, and force them to give me what I want from them. I have Mr. Rassam in my hands; what shall I fear?" Mr. Flad stated that the King during the last six weeks had caused 4,000 persons to be put to death, soldiers and peasants, either by burning them, cutting their throats like beasts, or by shooting them. He had also caused women and children to be tortured, dishonoured, and starved.

Colonel Merewether kindly invited the whole of the officers of the party to put up at the Residency, and having made arrangements for the stretch on shore, the following morning, of the Sepoys, troopers, and camp-followers, the whole party set off for the Political Resident's hospitable roof, situated, at a mile's distance, on a hill commanding the entrance to the harbour.

The heat of Aden was, as usual at this season, intense, but the high spirits of the explorers, combined with the artificial aid and refreshment of punkahs, and access to a well-stored cellar, made up the elements of a jovial supper-table. Late in the evening Lieutenant Hennell arrived from the *Coromandel*, and gave a graphic account of the voyage of that vessel, with its freight of horses and mules. Ten mules had succumbed during the passage, not a large number considering the animals were closely packed between decks, and the weather had been

so bad as to prevent a proper ventilation of the mule deck.

Since the opening of the Suez Canal, those continental politicians who regard England with the varied feeling of jealousy and distrust, have not hesitated to prophesy, on the one hand, that Great Britain, by reason of this great work, will be deprived of her supremacy in the East, and of her monopoly of the trade of the Eastern seas; and, on the other, that the Canal, made at the cost of continental nations, will only convert the Red Sea into an English lake. The attention of European Governments is doubtless directed at the present moment to the change likely to be produced in their political prospects and trade by the opening of the new sea route, and the bearing it may have upon future alliances and future wars. Under these circumstances, therefore, as the Reconnoitring Field Force has necessarily called at Aden on its way to Abyssinia, a passing notice of the British possessions near the Red Sea, and their value as posts of offence and defence, will not be considered out of place in this narrative.

The British possessions in this quarter of the globe consist of the peninsula of Aden on the coast of southern Arabia, and of the island of Perim at the mouth of the Straits of the Red Sea. Aden is situated ninety miles outside the Straits. Perim

may be said to divide the Straits into two channels. Aden is about twenty-five miles in circumference, and is joined to the mainland by a low narrow sandy isthmus about a mile in width. The peninsula is a volcanic mountain, and numerous spurs run from the crest of the crater-walls down to the sea. The harbour, which is large and well protected, is a bay enclosed between the peninsula and the Arabian coast. The mouth of the harbour is seven miles in width, and on the Arabian side there is another volcanic mountain called "Little Aden." Little Aden may be said to be uninhabited, as it is only the resort of a few Arab fishermen. Aden was purchased by us from the Sultan of Lahedj in 1839, and the present Sultan, who lives at Lahedj some twenty-four miles inland, receives a yearly stipend in lieu of custom duty lost by the cession of the port to the British.

The island of Perim, situated just outside the Red Sea Straits, is about three miles in length by one and a half in breadth. It possesses a small but good harbour, capable of accommodating a few large vessels. The entrance to the harbour is about half a mile in width. The British occupied the island when the French were in Egypt at the commencement of the present century, but subsequently retired from it. The island was re-occupied in 1857, when Sir William Coghlan was Resident at Aden.

These possessions, if not very extensive or valuable in themselves, must be regarded as posts of very great importance to the mother-country. By means of Aden and Perim, the nation may be congratulated on finding itself occupying a position with regard to the Red Sea which other nations have in vain attempted to rival for many years past. Holding these possessions, any great injury to our commerce, should at any time the country around the Suez Canal be occupied by a nation at war with us, could effectually be prevented.

The fortifications of Aden, commenced in 1845, were in progress for about twenty years. The defences of the harbour should be remodelled to suit the requirements of the advance of the science of attack and defence at the present day.

Perim island is unfortified. It is entirely dependent upon Aden for supplies, and no nation could keep it but ourselves. Its harbour and position are its defences.

The Suez Canal is a peaceful work, and can only assist the rivalry of nations when at peace. It can never form but a small element in the calculations of war; for it would be a matter of no great difficulty for a powerful nation like our own to close it at either end, or to destroy its works near its two mouths. Alarmists may set their fears at rest on this score.

M & N Hanhart. imp.

ADEN.

London, Smith Elder & C.ie 15 Waterloo Place 1870

Early the next morning, the 27th, having business to transact in the camp, Colonel Merewether drove some of our party to the town of Aden, which is situated on the floor of an extinct volcano, five miles distant from the harbour. The crater is about three miles in diameter, and contains the native town as well as the British camp. The town looked bright and clean, and on closer inspection the admirable condition in which it was kept was very apparent. Arab and Parsee merchants take very kindly to the municipal institutions lately established; but it is more than probable that the subjects of this little kingdom have learnt to pay due regard to the despotic sway of their English Governor. Governors at Aden, since the commencement of Colonel—now Sir William—Coghlan's time, have been accustomed to rule their Bedouin subjects with a parental yet firm hand. The consequence is, that although Aden is regarded by Europeans with extreme dislike on account of its climate,—of which, until Zulla was known, it used to be said it was the *third* hottest place, Massowah being the *second*, and the *first* unmentionable,—it is looked upon by all the surrounding nations of both quarters of the globe, as the Franco-Algerian regards Paris, or the Anglo-Indian London.

It was gratifying to find that the Indian Government had become fully alive to the necessity of

increasing the water supply of the place, so long recommended by its officers on the spot. It is a serious matter that an important post like Aden should be unable to accommodate any considerable increase in its small garrison without being placed in great straits for the want of water. Though so much has been said of the misfortune of having had to supply our troops at Zulla with drinking water condensed from the sea for a few months only, it should not be forgotten that Aden has, in a great measure, been forced to rely upon the same source for a long series of years. It is to be hoped that when the aqueduct from the interior to the British lines at the Isthmus is completed, as it probably is by this time, the pressing want of a proper supply of that essential element will be in a great measure relieved. But Government should not be satisfied with that remedy alone. The aqueduct can only be depended upon in times of peace, as it might be destroyed by an enemy. The resources of the place itself, so greatly developed in the time of Sir William Coghlan, should be amplified by the construction of bunds and tanks in the valleys of the plateau overhanging the town. General Waddington, who designed in detail the greater portion of the fortifications, and whose opinions on public works were rarely disregarded, yet failed to induce the Supreme Government of India to carry out his

project for the construction of a reservoir behind the Kussaf valley, which he recommended twenty years ago. This project has since been perfected by Lieut.-Colonel Fuller, R.E., but has not as yet been sanctioned.

The inhabitants of Aden owe much to Sir William Coghlan, for having restored the ancient tanks in the Tawela Valley, discovered by his assistant, Captain, now Colonel Playfair, R.A. The restoration comprised considerable improvements in the old cisterns, whereby their capacity was largely increased. These works, brought to a close in Colonel Merewether's time, while proving a great boon to the place, if not remunerative, have been paid for, out of the value of water stored. It is a difficult matter to prevent leakage from such works, perhaps almost impossible, unless they be protected from the direct action of the sun's rays, so scorching in southern Arabia. Artificial reservoirs founded on porous strata, are not often subjected to the trials such works have to bear at Aden. As it only rains on an average one day in three years on the Peninsula, the reservoirs, unless much enlarged, must be dry for long periods, which is a severe trial for even the best hydraulic cements.

Although the crater of the extinct volcano of Aden, already mentioned as having a width of three miles between the crests of its walls, is exceeded in

size by many others in different regions of the earth, such as Teneriffe, which is eight miles across; nevertheless it is believed to be the fact, that it is peculiar to the place that the inhabitants should have seized upon the floor of the crater of a volcano as the most suitable site for their town. It cannot be supposed that they have made their selection after due consideration of its geological aspects, and having come to the conclusion that the fire below must be extinct; but rather that it was the only flat surface in the neighbourhood of the bays, and also that it was naturally fortified. The walls of the crater are lofty and precipitous, particularly on the south side, which culminates in a peak 1,760 feet in elevation; but like nearly all craters, there is an opening on one side, breaking the continuity of the circular enclosure. In this case, the sea enters through the breach, for a short distance. The principal cantonment is situated on this beach, which rises gradually to the opposite walls of the crater. This is the floor which contains a town numbering 25,000 inhabitants.

Some idea of the antiquity of the Aden volcano may be gathered from the fact, that although the rainfall does not exceed five inches in three years, yet the rocky water-courses—when there is water—in the valleys in the interior of the crater, are worn as smooth as the beds of the nullahs in the Deccan

in India; and, in some places, the adamantine trap has been scooped out to a great depth by the action of flowing water. Huge boulders of trap-rock are to be seen standing in the dry water-courses worn as round and as smooth as pebbles. Owing to the small rain-fall at Aden the Peninsula is barren, and the rocks, blackened by the sun, present a most gloomy and forbidding appearance. The hot season lasts for six months in the year, and the heat in the town and cantonment during this period, owing to radiation from the crater walls, which also keep out the breeze, is some 10° in excess of that at Steamer Point, near the mouth of the harbour.

All necessary arrangements for the conveyance in the *Euphrates* of some engineering stores required for the first disembarkation were soon completed, and Colonel Merewether, having obtained from the Peninsular and Oriental Steam Navigation Company's agent the loan of a small steam-tug, the *Saadah*, in place of the despatch boat, *Scinde*, put back to Bombay, and also a large decked iron coaling-barge laden with coal, the Exploring Party were ready to continue their voyage the following evening.

Before leaving the residency, Colonel Merewether summoned the messenger of Menelek, King of Shoa, who, as before-mentioned, had sent to Aden a letter and presents for the Queen. Colonel Merewether, who had found her Majesty's reply

awaiting his return from Bombay, was now able to deliver it to the messenger, together with suitable presents in return for those sent to the Queen. It is gratifying to know that the Abyssinian Prince was so pleased at receiving her Majesty's gracious answer, that he wrote to the captives at Magdala to inform them of his delight at having been recognized by the Queen of England. Menelek, though a good prince for an Abyssinian, and having in his kingdom some form of government, is no soldier. He appeared before Magdala one day with no less than 30,000 men, but speedily decamped on some shallow pretence, being afraid to attempt the assault of the place. Theodorus' name and prestige still carried sufficient weight to overawe this weak prince and his large army. Menelek's messenger departed with a beaming countenance from his interview with the Resident at Aden, having been informed of the projected attack by the British upon the dreaded Theodorus.

On the evening of the 28th September, the Exploring Party re-embarked to continue their voyage, Colonel Merewether receiving his accustomed salute, as Political Resident, from the battery on the pier. The two steamers, having in tow the tug *Saadah* and the coal-barge, immediately weighed anchor, and steamed up the harbour, receiving the cheers of the passengers on board the Peninsular

and Oriental mail-steamer, which had lately arrived. Unfortunately, one of the tow-ropes of the weighty barge fouled the screw of the *Euphrates*, which commenced whirling round, much to the astonishment of the spectators in the harbour and on shore. Those inclined to be superstitious who witnessed this contretemps, doubtless regarded it as an omen boding ill for the success of the expedition on board the luckless steamer. After an hour's labour, the hawser, which could not be disentangled, was cut in several places below water, and the *Coromandel*, which had been marking time the while, led the way towards the Straits of the Red Sea. Owing to the great heat the officers all slept on deck; some making temporary mattresses of the bales of hay; others betaking themselves to the skylights; while the remainder selected soft planks on the deck.

In the middle of the night, a breeze springing up, one of the tow hawsers of the wretched barge parted with a report like a pistol-shot, and was immediately followed by its fellow, unable to bear the increased strain put upon it. Here was another presage of evil. The small party of Lascars placed on board the barge for steering purposes, no doubt felt very little pleased at being permitted to cruise on their own account in their coal clipper, with flush deck and no bulwarks or masts; but this misadventure did not cause much delay.

Early in the morning, the *Euphrates* was abreast of the island of Perim, the reoccupation of which by the British, in 1857, caused such commotion in France. It is well known that at this period the French were anxious to obtain a footing in the Red Sea, and report has it that a French war-vessel, with Perim in view, called in at Aden for supplies. The Resident had either received private intelligence, or intuitively divined the object of the presence of the foreigner in his waters; whereupon he invited the commodore and his officers to a luxurious entertainment, which was prolonged into the early hours of the following morning.

On the eve of the banquet, a loiterer at Steamer Point might have observed, had he been looking that way, a small schooner weigh her anchor for a cruise in the harbour. It was not an unusual thing for this small vessel to take such a cruise; but on this occasion, after our loiterer had witnessed the tack on which the bark weathered the nearest projecting spur of the peninsula, he might have waited long enough had he had the curiosity to linger until she returned.

Duly impressed with the hospitality shown to them, the Resident's foreign guests departed on their secret mission. The ninety miles to the Straits were soon traversed; but no sooner was the telescope of the Frenchman brought to bear

upon the distant peak, than, with surprise and dismay, a flag, the flag of "perfidious Albion," was descried floating on the breeze. The island was almost uninhabited, but the smoke of a camp-fire gave notice that even on this arid spot there were some indications of life; and had our loiterer been looking on the scene, he might have perceived, snugly ensconced in a nook in the bay, the little schooner he had lost sight of on the waters of Aden.

Perim was passed on the morning of the 29th September. Since the occupation of the island by the British, a lighthouse has been erected on a hill 200 feet above the sea. The light may be seen twenty miles off, and is a most invaluable guide for the mariner making for the Straits. There was no occasion, however, for making this light a revolving one with its complicated machinery. A fixed light would have answered the purpose, as the nearest light—that at Aden—is ninety miles distant. The Aden light, moreover, was the last set up; and so might have been made, if really necessary, a revolving one. The value of the Perim light is undoubted; but what may be the use of the Aden light in its present position is not so apparent.

The *Euphrates* steamed up the Red Sea at no great distance from the African shore; and on the 30th the distant and lofty mountains of Abyssinia were viewed from the deck, and intimated to the

explorers that their voyage was drawing to a close. The Abyssinian mountains were still so distant that we were greatly impressed with their noble appearance. The Red Sea, which may be said to be infested with islands, is prolific of these enemies to navigation on the Abyssinian coast. These islands are of two formations, either volcanic or coraline. Towards evening the *Euphrates* arrived at the channel which leads up between the island of Mahasoo and the African shore. The *Coromandel*, which had been lost sight of after passing the Straits, was known to have made for an anchorage off the island of Ajuz, in order to pass up the somewhat narrow channel towards Massowah during daylight. The *Coromandel* had only to go to the rendezvous at Dissee island; but it was necessary for the *Euphrates* to visit Massowah itself for the examination of the port and for other objects. Accordingly, to obviate the delay which would be caused by anchoring for the night, it was determined—Captain Avern having the best Arab pilot of the Red Sea on board his ship—that the *Euphrates* should proceed cautiously on her way during the night. The speed of the engines was regulated at "dead slow," and at 10 P.M., in the satisfactory anticipation that dawn on the morrow would see the good ship riding at anchor in the port of Massowah, the whole party retired to roost.

But "Man proposes and God disposes." At four bells—2 A.M.—the night was unusually dark, the sea calm. The air was still, and the repose of all on board complete, when a loud call of "hard-a-starboard" rudely disturbed the sleepers on deck, and almost in a moment the *Euphrates* struck on a coral reef.

Though the vessel, by the motion of the waves, kept grating and bumping on the rocks, no land could be seen. Being on shore, of course it was not known where we were, not even the practised pilot could distinguish any object through the gloomy darkness. Some thought it was the African coast; the pilot conjectured it was the island of Mahasoo, in which opinion it was subsequently found he was right. But the name of the place did not much matter, it was the thing itself that was objectionable. The captain, who behaved with calmness and decision on this trying occasion, immediately caused the engines to be reversed, but without any effect. There were no breakers visible, and the lead which had been going all night, suddenly giving only six fathoms, had occasioned the warning to alter the course of the ship and stop the engines; but not in time, even at the slow speed she was going, to be of any avail. Now, whilst hard a-ground, the soundings on one side of the ship gave two-and-a-half, and on the other thirty

fathoms. Captain Avern steadily persisted in endeavouring to get off the rocks by reversing the screw, and as the vessel was not leaking through any damage sustained from grating on the reef, he was, doubtless, perfectly justified in doing so, and in striving to save his ship. Had the steamer sprung a bad leak, the safety of the living freight would, probably, have been compromised by following such a course, as an eye measurement of the capacity of the boats was not reassuring. In such a case the hitherto unlucky coal-barge would have proved of use, though, being so heavily laden with coal, it was rendered very unmanageable.

After grinding on the reef for two hours and a half the vessel began to move, and with a deep grating noise which vibrated most unpleasantly through the frame of the ship, and a tremendous thump of the blades of the screw against the rock, to the extreme delight of all on board, the *Euphrates* floated clear, and Theodorus' brief respite came to an abrupt termination. Captain Avern had indeed saved his ship, but his difficulties were not over, for though afloat it was too dark to see anything, and there was danger, having escaped Scylla, of being on to Charybdis. Moving slowly astern, the soundings at once deepened to thirty fathoms and no bottom, then to sixty fathoms and no bottom. The wretched barge caused great difficulty with the

hawsers getting under the ship's quarter, the barge itself hugging the *Euphrates* amidships. The engines were now stopped, and for an hour the vessel was kept out of soundings. At 5.30 A.M. a low streak of land was discerned by the pilot, and was shortly perceptible to all. The Arab seaman immediately pronounced the land to be the island of Mahasoo, as he had before conjectured was the case. Mahasoo is a long low island to the south of Dhallac island.

The cause of the *Euphrates* leaving her course arose from a strong current setting in from the African shore across the channel, which bore with fatal effect upon the steamer proceeding at slow speed. That the vessel escaped from her perilous position must be attributed, under Divine Providence, to the fact that she ran against the reef at reduced speed, and that the calmness of the sea and the tide were both in her favour.

The *Euphrates* lost no time in prosecuting her voyage, and steaming by Hammar and Dissee islands, the smoke of the *Coromandel* making her way to the position selected for rendezvous, was observed in the distance. The island of Massowah shortly came in sight, and at 9 A.M., the 1st October, 1867, the fortunate *Euphrates* dropped her anchor in the port.

We had been sixteen days on the voyage from Bombay to Massowah in the Red Sea, a distance

over 2,000 miles. Deducting the two days' detention at Aden, the voyage was one of fourteen days, nine of which were against the south-west monsoon. In the fair season this voyage became reduced to one of ten days. We should contrast this with the voyage of the last military expedition which left the shores of India for the Red Sea in the year 1800, A.D. General Baird left Bombay at the end of December with a fleet of transports conveying 6,400 troops, of whom 3,600 were British, and 2,800 Sepoys. Although sailing in December, the monsoon, which commences in May, had set in before the fleet arrived at the Straits of the Red Sea. After struggling hard with contrary winds for two months, in the course of which two transports were lost, the expedition arrived at Kosseir in Upper Egypt, in the beginning of July 1801. General Baird, owing to his lengthened voyage, arrived in Egypt too late to operate, as had been intended, as a diversion to the British Force when it first landed at the mouth of the Nile.* Thus in sixty-seven years engineering science has condensed the labour in navigation from 192 days to 14 and 10 days. The advance of this science will not rest here, and doubtless in another sixty-seven years the methods of the present day will be considered obsolete. The engineering dictionary contains no such word as

* ALISON'S *History of Europe*.

"impossible." No modern project has had this word so often bestowed upon it as M. de Lesseps' Suez Canal, and yet this gigantic work may now be considered as an accomplished fact.

It was during General Baird's voyage that the British flag was first planted on the island of Perim. Had the British not re-occupied the island in 1857, the French could not have held it; no supplies or even water being obtainable on the barren rock. It is true, that by watching at night turtle may be sometimes captured on the shore, but even this aldermanic luxury can scarcely be regarded as implying all supplies necessary for existence. A handbook of the route to India informs a confiding public that the hotel at Perim is only "second-rate;" but the compiler must have been victimized by some wag, or the information have been based on a standard somewhat different to that usually implied in Europe.

CHAPTER IV.

PRELIMINARY INVESTIGATIONS.

Massowah — Buildings — Egyptian Artillerymen — M. Munzinger — Egyptian Governors — Plowden's Ill-treatment — Mahomedan Bigotry — Lord Stratford de Redcliffe — Suicide of Turkish Governor — Colonel Hussein Bey — His Enmity towards the British—His Removal—Heat at Massowah—Thunder Storm—Merchants—Moncûlu Visited—Consul's House—Water Supply—A Musical Mule—Female Water-carriers—Mechanical Appliances—Massowah condemned as a Port and Landing-Place for the Expedition—Departure from Massowah—Promontory and Mountain of Kadm—Valentia or Dissee Island—Annesley Bay — Rendezvous — Ad-Negûs Explored — Thunder Storm — Cross the Bay—Zulla Shore Explored—Water Supply—Mulkuttoo — Value of Native Information — First Occupation of the Country—General Disembarkation—Sloping Beach—Site of Camp—River Hadâs—Weah — Hadôda — Komaylé — Sooroo Pass—Shohos—Quartermaster-General's Department—Major Baigrie—His Drawings — Engineers — Commissariat — Medical Staff—Harbour Master—Decline of Water Supply—Cavalry sent to Hadôda — Zulla — Wells — Names — Hot Springs of Atsfé — Brackish Water — Rassâmos—Salt Trade—Arâphillé—Egyptian Encampment—Water Supply—Gorges of Assâda and Ooêma—Stranding of the *Saadah*—Garbage—Position of Camp changed—Heat and Dust Storms.

MASSOWAH, the so-called port of Abyssinia, is a long low coral island, destitute of water, lying parallel to the African coast at a distance of less than half a mile. The island is crowded with dwellings of the

A Ralfe Del.

M & N Hanhart Imp.

MASSOWAH

London, Smith, Elder, & Co 15 Waterloo Place 1870.

rudest description. The ordinary construction consists of thin poles stuck into the ground close together, with roofing of sea-grass. There are a few buildings more substantial, composed of coral plastered with mortar, and having flat roofs to catch the rain-water. These erections present a more imposing appearance at a distance than they really deserve, owing to the comparative insignificance of the rest of the town, if such a place can be designated by so imposing a name. The word "Town" becomes very elastic in the East.

As the *Euphrates* took up her position in the port between the island and the mainland, some Egyptian artillerymen made their appearance on a small eminence at the entrance occupied as a battery. As, however, the *Euphrates* was only a transport, and had no armament, she was unable to salute the Crescent and the Star, consequently the aforesaid artillerymen laid down their rammers and retired to their chibouques. After breakfast, a few hours were consumed in staring at and sketching the island we had heard so much of; and the population, evidently having little to do, thronged the beach and gazed on us in return. About noon M. Munzinger, the acting British Consul, who is a Swiss by birth, came on board, and was heartily greeted by Colonel Merewether, who already appreciated his energy and worth. M. Munzinger had no later intelligence

of the captives and the King's proceedings than we were already in possession of; but he was ready to give all assistance in his power—and that, indeed, was not little—to the pioneers of the expedition about to invade Abyssinian territory.

Later in the afternoon Hussein Bey, the Egyptian Governor of Massowah, came on board to visit Colonel Merewether, who soon put him at his ease by offering him a choice Manilla cheroot, and a cup of coffee. As Hussein Bey, who holds the rank of Colonel, could only speak Arabic, Colonel Merewether conversed with him through M. Munzinger, who is a perfect polyglot, speaking English, French, Italian, German, Arabic, and the Abyssinian languages. The Governor was asked to assist the expedition with boats, supplies, coal, &c., and he expressed himself as being most anxious to do everything in his power to further our objects. Having translated this and other civil speeches, it was amusing to hear M. Munzinger add, in English, his own opinion of the worthy ruler sitting at his elbow. Hussein Bey listened gravely to M. Munzinger's interpretation as if he understood every word, and the Consul's face bore the most benign expression as he informed Colonel Merewether that the Governor was a bad man, capable of any enormity, and that not a word he said was to be believed!

Massowah appears to have been very unfortunate in her Governors from the date of Consul Plowden's first appointment, in 1848, and probably before that period, up to the time of our visit in 1867. Consul Plowden used to complain bitterly of the treatment he received at Massowah at the hands of its Turkish Governors. Although a man of great firmness and ability, Plowden found himself at Massowah so isolated from the support consular officials are able to obtain in Europe, or near other centres of British power, that he was obliged to submit to a series of great indignities. His authority was defied in the Red Sea, and he was unable to obtain, not redress, but even fair treatment. He was forced to invoke the aid of the Foreign Office to procure an order from the Viceroy of Egypt for the protection of his correspondence, which order, when obtained, was disregarded. During his temporary absence from Massowah his house was burnt down, the blame being laid on the Abyssinians; and workmen of all classes were prohibited, under penalties, from rebuilding it. They were flogged on frivolous pretences, and dared to perform the most trivial offices for him. Presents from Râs Ali, King of Abyssinia, to Her Majesty, and return gifts were detained in the Custom House; and the Consul was unable to obtain their delivery until he had procured an order from the Pasha of Jiddah, on

the opposite coast, in whose pashalic Massowah is included.

Political considerations alone induced the Western Powers to support the Ottoman Empire; for, owing to the religious bigotry of the nation, their intolerable pride and hatred of the Christian, enhanced by his well-known crusade against the most cherished of their social customs, the Frank, when visiting their country, or brought into contact with them, met with nothing but insult and indignity from the Turks. The Governor of Massowah represented the assistance afforded to his Government by England and France, as the result of obedience on their part to the commands of the Sublime Porte. At the very time when French and English blood was being poured out on the soil of the Crimea on behalf of this fanatical but decaying nation, the Pasha of Massowah caused a prayer, composed by himself, for the destruction of all Christians to be read in the mosque!

With some difficulty the British Government obtained the dismissal of the Governor of Massowah, and the Porte expressed their disapproval of his conduct, by promoting him to a better post!

The succeeding Governor, so far from inaugurating a new condition of things, as regarded the foreign Consuls, behaved in a manner still more inimical towards them. The Turk feared the

presence of the Frank in the Red Sea. His jealousy would brook no rival there, who perchance might outstrip him in the race for the acquirement of Abyssinia. The Frank would, of course, assert his right to aid his co-religionist, but it was the particular mission of the followers of Mahomet to proselytise with the sword the inhabitants of that country, which was almost within view of the Holy City of Mecca. Can it be doubted, but that the Massowah authorities had their secret instructions, which were intended to cancel the professions of friendship contained in the correspondence of the Turkish Minister?

The ire of our Ambassador at Constantinople at length became fairly aroused. Lord Stratford de Redcliffe, whose decision and firmness with the Porte caused him to be feared and respected, indited a characteristic official note, dated the 5th March, 1855, to the Minister, from which the following extracts are taken *:—

"Now the Pasha of Massowah instead of recognizing these claims, or even protecting the British Consul from wrong, displays his contempt by withholding from him the means of self-defence, and persecuting such native workmen as dare to enter his employment for the most innocent and necessary operations. He cannot even repair his house,

* *Blue Book.*

improve his garden, or render his wells fit for use without entreating the Pasha's permission. His frequent appeals for redress have proved ineffectual, except in one or two cases, where tardy and imperfect orders, reluctantly executed, have been received from Djeddah.

"The Pasha's notorious incapacity might excuse him in some degree if his undisguised fanatical malevolence and recklessness of all responsibility, did not at the same time proclaim the real cause of his misconduct. He raises hatred against the Sultan's Government by the bigoted and sanguinary violence of his language when speaking of Christians and others who do not profess the Mahomedan creed. He betrays the weakness of his Sovereign's authority by armed expeditions, which, tracked in blood, terminate in failure; and by ill-timed pretensions, which have neither right to warrant nor force to sustain them.

"The undersigned is unwilling to suppose that the Porte can so far overlook what is due both to herself and to her allies, as to persist in keeping such a man in her employment. But the dismissal of a culpable agent, however opportune and even necessary, will be of no real advantage, unless the remedy be applied in a right spirit. The system itself requires to be changed. A greater responsibility must be made to press upon the new Governor.

Jealousy of foreign intercourse with Abyssinia must cease to be the mainspring of his policy. He ought to be supplied with a regular force sufficient to maintain his authority in the island. He should not be encouraged to throw brands of discord, productive of slaughter and confusion, among the inhabitants of the neighbouring continent. He must not be supported by the clandestine favour of powerful individuals opposed to the tenour of official documents. The example of his predecessor's dismissal must not be reversed to his conception by a misplaced promotion of the culprit."

The Pasha of the Hedjaz, acting under instructions from Constantinople, instituted an inquiry into the numerous charges which had been preferred against Governor Ibrahim Pasha of Massowah, whereupon that functionary, for the first time in his career, committed an act worthy of all praise. He retired to his harem, and there hanged himself. This occurred on the 14th February, 1855.

Mr. Rassam, who arrived at Massowah on the 23rd July, 1864, found the Governor Purtoo Effendi, civil, obliging, and very sick. He shortly took his departure, and was succeeded by 'Abdallah Effendi, who was also friendly, although he would not allow the Envoy to shelter himself from the fierce rays of the sun by the erection of a semi-permanent residence on the shore opposite the island. The slave trade,

which has always been fostered under the Turkish and Egyptian Governments, was, however, flourishing then, as doubtless it is at this moment, in spite of the prohibitory injunctions issued by the Porte to satisfy her allies.

'Abdallah Effendi was succeeded at Massowah by Colonel Hussein Bey, whom we left on board the *Euphrates*, discussing Colonel Merewether's cheroots, and the best manner in which he could show his goodwill, and afford the assistance in his power in furthering the objects of his master's firm ally. His words of sweetness were probably coupled with a mental reservation; for, judging by his future actions, he must have retired from the interview with the full determination of offering every obstacle to our proceeding his ingenious mind could suggest.

It might have been supposed that this Turkish, or rather Egyptian official—as the Porte a few years previously had transferred its possessions on the western coast of the Red Sea to Egypt—would have had the sagacity to perceive, later on in the campaign, that the exhibition of force made by the British in Annesley Bay and on the plains of Zulla showed the full intention of that nation to prosecute vigorously, and with probable success, their determination to humiliate the Abyssinian king. It is scarcely possible to believe that this petty Governor

could have held such an exalted notion of his own power as to imagine for a moment anything he could do to thwart the operations of Sir Robert Napier and his officers would really benefit the Ottoman cause; that he could at once be the means of warding off the evils which the traditions of his office told him his predecessors had laboured to avert, namely, the occupation of Abyssinia by the English or the French to the exclusion of the followers of the Prophet, and thus earn the gratitude of all true believers. Yet, the proceedings of the man would seem to imply this. He incited the Shoho tribes to plunder the English and commit other outrages, when at the commencement they had behaved in a very friendly manner. He was supposed on good grounds to have caused the telegraph-wires to be repeatedly cut and otherwise destroyed. He recalled the Chief of the Dánkalis when he knew his services were required by Colonel Merewether; and the political department obtained pretty strong proof that he was in secret communication with Prince Kâsa of Tigré, and that it was not for our good. His messenger with the Viceroy's letter to Abyssinia, spread reports at Adowa, Prince Kâsa's capital, injurious to us, endeavouring to mislead the people to believe that we intended taking possession of the country. When Colonel Grant, Speke's *confrère* in Nile exploration, was

sent by Sir Robert Napier on a mission to Prince Kâsa, he reported from Adowa that the Nâyib of Massowah had arrived there on the following day, for the supposed purpose of preventing Governor Hussein Bey's letter from falling into his hands. This unfriendly ally was at length removed from his post at Sir Robert Napier's request.

The heat at Massowah was much the same as at Aden. The thermometer stood at 95° at 9 A.M., denoting an oppressive heat, when, as on this occasion the air was stagnant.

At 4 A.M. the following morning a violent thunderstorm broke over the place, disturbing the whole party, tired enough with the previous night's coral reef business. However, it was impossible to take it quietly, as the wind blew with great force and the rain came down heavily, which sadly interfered with repose on deck.

The wind which accompanied the storm helped to prove how very inadequate for the accommodation of a fleet was the port of Massowah. The wind blew off shore, and the ship swinging round across the harbour, the houses on the island appeared close under the stern ports.

The island itself has no natural supply of water, and the greater number of the inhabitants retire to the villages on the mainland after the business of the day is over. It was interesting to observe, as the

sun began to dip towards the western horizon, the boat-loads of motley passengers which crossed over from the island.

M. Munzinger having kindly arranged to provide a few riding animals for the following day, some of our party went on shore on the mainland soon after daylight in order to investigate the water supply at Moncûlu, a village situated about five miles inland where the greater number of the Massowah merchants reside. We landed at a small pier, and, not finding the mules, proceeded to walk over a low-lying sandy plain. The track led across greasy ground from which the tide had receded, and along the edges of shallow pools of water formed by the previous day's rain. The climate not being adapted for a long walk, we were not sorry to be met at half a mile from the shore by Munzinger's mule boy with his mule and two or three ponies, which on being mounted ambled away at a good pace. A worse landscape than that of the plain of Moncûlu was never beheld: a level sandy plain, devoid of all vegetation, and presenting to the eye nothing to relieve its hideous monotony, saving here and there a group of the bleached bones and skulls of various animals. True, the mountains of Abyssinia which formed the background presented a contrast, but they were too distant to give any effect to the dismal foreground. The pursuit of gain at Massowâh

must indeed be absorbing to enable its people to cross this dreary desert twice a day.

After an hour's ride we passed by a native village, our guide pointing to another further on as our destination. The native huts appeared neatly constructed of poles and grass, and each dwelling had a piece of ground attached, enclosed by a high fence impervious to vision. We observed several black faces ornamented with sets of white teeth, evidently belonging to the feminine portion of the community, looking at us through half-closed doors as we passed by, but for which circumstance we might have supposed the village was deserted. Presently we arrived at the country dwelling of the "Consool," an oblong construction of rickety aspect, standing in a large uncultivated garden. The building, or rather shed, which looked something like an exaggerated summer-house in a dilapidated condition, was constructed of poles set upright close together with a thick roof of grass, light being admitted through openings of interlaced saplings. As M. Munzinger was residing at this time in Massowah, we had some difficulty in gaining admittance into his rural villa.

The wells dug in the bed of a torrent, or hard by, were not deep, and no doubt a plentiful supply of water could be obtained by increasing the number of wells. The liquid was tolerable, and perhaps it

was only fancy that caused us to detect a slight twang in it, as though it was not quite the genuine article. Concluding our inspection, we mounted our ambling steeds, and turned our backs on Moncûlu with little wish ever to return. A new bird attracted our attention near the village, the crow of the country, whose mournful hue was relieved by a white ring round the neck. Colonel Phayre, who rode M. Munzinger's favourite mule, which afterwards distinguished itself during the reconnoitring journeys and was finally stolen in Abyssinia, got on capitally with the European mule saddle; but the native ones his companions were favoured with, having perfectly upright pommels and cantels, were the most abominable things ever invented both for man and beast. The ornaments and chains which dangled round the neck of Phayre's mule rattled as if the rider wished all people to know that his pockets were filled with dollars. Without this accompaniment, the owner of the mule asserted, his musical animal would not go a yard.

We passed numerous bevies of the gentler sex on our return journey. These poor creatures of all ages were engaged in carying water in skins from Moncûlu to Massowah, the extended skins looking at a little distance like bloated black sheep. These unfortunate water-carriers, a few only of whom had fairly formed lineaments of face, toiled

painfully along with their over-heavy burdens resting on the small of the back, the leather thongs supporting the weight passing round the forehead or across the breast, as is the custom with the hill coolies of Eastern India. The sight was painful, but it is fair to add that the poor creatures did not appear to be particularly unhappy or to be lamenting their fate. Theirs is a hard slavish lot, toiling thus daily with a heavy load the length of a healthy man's walk. What a contrast these poor creatures, waddling along with their backs bent at an angle of 45°, their chests deeply indented with leathern thongs, present to the graceful Hindoo woman, who in the early morning visits the well hard by her dwelling to perform her ablutions and carry home cool water; who amuses herself with sweet gossip with her neighbours, and on her return poises with inimitable grace on her well-shaped head her burnished vessels, the contents of which necessitate for their safety a perfectly upright position and well-balanced gait.

It is wonderful that the people of Massowah should be so shortsighted as not to have introduced ordinary mechanical appliances to save labour. If mules and ponies fare so badly in the lowlands of Abyssinia as we are now aware they do, and which would prevent their employment in draught, still the country being fairly level between Massowah

and Moncûlu, and without obstruction, the same quantity of water might be conveyed in hand-carts with half the labour, and that not painful. If this is too great an advance in science to expect in such a barbarous country, the skins carried on poles resting on the shoulders would be conveyed with much less toil than is entailed by the present system. Lastly, if any other Government than that of the Turk or Egyptian ruled at Massowah, the water question would be speedily settled by laying down five miles of piping; as, of course, there is sufficient head of water to obviate much expense, the torrent running into the sea after passing Moncûlu.

Before reaching the shore it began to rain, and we got wet through, which gave one of us fever for a few days.

Having become fully acquainted with the resources of Massowah with reference to the requirements of the British expedition, the committee were not long in coming to the conclusion that Massowah was ill adapted for the purpose in view. The port, such as it is, could not accommodate more than a dozen large vessels, if so many; the water supply was too far from the shore; and the width of the lowlands greater than it might be necessary or would be desirable the British troops should encounter.

Colonel Merewether speedily completed, through M. Munzinger, such arrangements as were necessary

for our progress. He obtained the services of the young Chief of the Dánkalis, whose country lay south of Annesley Bay, as also one of the brothers of the Nâyib of Harkîko, the native local Chief, residing a short way down the coast, whose predecessors had formerly ruled at Massowah under the suzerainty of Abyssinia. These Chiefs came on board in the evening, and M. Munzinger having also joined our party, the *Euphrates* quitted the port of Massowah at dawn the following morning, the 3rd October.

The *Euphrates* steamed south-east across the Gulf of Harkîko to the promontory of Râs-el-Kadm, rounding which the mountain bearing the same name of no particular interest, 2,800 feet in height, and which slopes down directly to the sea-shore, passed in review. Crossing the mouth of Annesley Bay, the *Euphrates* shaped her course for the southern end of Valentia or Dissee island. This island, about four miles in length by one in breadth, is connected by a bank with a small island situated some seven miles to the northward. Annesley Bay is, therefore, in a measure, protected at its mouth from north and north-easterly gales.

Annesley Bay, christened by Lord Valentia with his family name, is of very considerable size. It is not an indentation in the land at right angles to the shore, but penetrates the coast in a southerly

direction, at an angle of about 55°. Its length is nearly parallel with the foot of the Abyssinian range. It is not strictly correct to say the bay penetrates the land, for the real fact is that it is the land which has encroached upon the sea, and thus formed this truly magnificent bay. This subject will not be dwelt upon here, but will be treated of in connection with the geological formation of the country and processes now at work, which will be fully discussed in a subsequent chapter.

The bay is formed by the peninsula of Buré, and its dimensions are as follows:—The extreme width of the mouth from Râs Tikul to the north end of Buré, is about eighteen miles; the depth of the bay from the same line thirty miles. The southern end of Dissee island lies six miles within the mouth of the bay. The width of channel on either side of Dissee, is eight and two miles respectively. The narrowest width of the bay, five and a-half miles, is at Ad-Negûs, whither we are about to proceed; the inner bay then widens out to about twelve miles. The western or mainland shore is very shallow the whole length of the bay, and round the head wherever the country behind is low; the eastern shore, that of Buré, is not so shallow, a range of volcanic mountains forming the back-bone of the peninsula. But the natural depth of water close in shore has been invaded by the coral insect, and is therefore

scarcely to be approached nearer by vessels than the mainland opposite. The area of the bay is upwards of 300 square miles.

A run of about twenty-two miles from Massowah brought the *Euphrates* to the point of rendezvous at Dissee, and the *Coromandel*, which had been patiently awaiting our arrival since the 1st October, joined us with the little tug *Saadah* in tow. The heavy iron coal barge still clung to the *Euphrates*, and was a heavy drag on her progress.

Hearing that there was water on the peninsula of Buré, at Ad-Negûs, nine miles south of Dissee island, the *Euphrates*, followed by the *Coromandel*, shaped her course southwards, and shortly anchored in a little bay close to the edge of a coral reef. Colonels Merewether and Phayre, and a party, went on shore to explore, but they returned in a few hours and reported very unfavourably of the place. The wells were insignificant affairs, mere holes in a rock, and were found to be over two miles from the shore. The village contained but a few huts, and the country looked unpromising. Nothing short of an ample supply of water and forage could have justified the selection of the peninsula of Buré, as a *point de départ;* for to march round the head of the bay would have lengthened the lowland journey very considerably, owing to the mountainous character of the neck of the peninsula.

A. Rolfe del.

M.&N. Hanhart imp.

LANDING PLACE ZULLA.

London, Smith, Elder, & Co. 15, Waterloo Place. 1870.

The day being considerably advanced and the sky threatening, it was resolved to remain at our anchorage till the following morning. Late in the afternoon a heavy thunderstorm, accompanied by most vivid lightning, passed over the bay, cooling the air somewhat till the following morning. At the earliest dawn Captain Avern weighed anchor, and made for the opposite side of the bay, the *Coromandel* in company. A run of about six miles brought us up at a considerable distance from shore, owing to the very gradually shelving beach, opposite to a large village seen some distance inland. Colonels Merewether and Phayre immediately landed, the native chiefs showing the way to the wells said to exist in the bed of a torrent not far from the shore. The wells were found rather more than a mile from the sea, excavated in the sandy bed of a torrent, and about ten or twelve feet in depth to the water. The water was of fair quality, and the natives said the quantity might be increased indefinitely by the excavation of other wells. They also stated that these wells supplied the large village seen inland, bearing the name of Zulla; and that the village, numbering about 200 houses, had no other supply, and never had had any other within recollection. The water supply, on the whole, appeared to promise well, more so than was afterwards proved to be the case; for it had so happened, although

the Exploring Party did not know of it at the time, that a storm in the mountains which had lately occurred had increased the supply at the period when it was first viewed. As the natives reported that there was no supply of water in the bay equal to that at Mulkuttoo, as they called the watering-place, it was thought advisable that the horses and mules, which had now been on their legs on board ship for twenty days, should be at once landed, before any further exploration of the shores of the bay was attempted. Should further examination of the coast lead to the discovery of a water supply superior to that of Mulkuttoo, then the animals could travel by land, and the steamers move on to the nearest anchorage. It is true the natives and the chiefs stated that the water supply of Mulkuttoo was the best to be found on the coast; but in this matter, as in all others hereafter, their advice and information was not implicitly relied on. Colonel Merewether and his party determined to be guided solely by personal and ocular demonstration, and to pin their faith on "seeing is believing" only. The two chief reasons for this course were, firstly, that natives, like ordinary travellers, only regard routes and supplies with reference to their own proceedings and requirements, and have not the experience and discrimination to view matters with respect to bodies of troops possessing superior means of removing

difficulties and obstructions and requiring large supplies; secondly, that natives, ready enough to form opinions of their own, have no regard for truth when they fancy their interests are concerned, and under such circumstances often give information wilfully intended to mislead.

When our Reconnoitring Party was exploring a pass in the Abyssinian mountains, one of our guides, a Shoho chief, used to come to us periodically and groan over our proceedings. If we would only leave this horrid defile, and follow him to his native valley, containing a delicious stream, teeming with flocks and herds, and possessed of an excellent road, we should find what a paradise it was compared to this Jehennam. Well, our business did eventually lead us into the Chief's valley, and a more awful track we never had the pleasure of tripping and breaking our shins over.

The *Euphrates* moved in as close to the shore as possible, but the beach shelved at so gentle a slope, it was found, that the unfortunate barge even could not be got in close enough to permit of a temporary landing-stage being made from it for the debarkation of the horses and mules. While the horses were being got out of the steamer on to the deck of the barge, a landing-stage twenty-four feet long and eight feet wide, formed of iron floor girders and wooden rafters brought from Aden, which had been

put together in the morning, was conveyed in the steam-tug as close in shore as she could go. A small native craft which we had brought on from Massowah, was anchored close to the tug, and Lieutenants Dawes and Jopp set to work to support the stage upon it. This was a matter of some difficulty, but was eventually accomplished. The barge containing the officers' horses from the *Euphrates*, was then towed out by the tug *Saadah*, and the animals walked down the stage into shallow water, from whence they proceeded to the wells at Mulkuttoo, where they were picketed. A few stores and a guard were also landed this day. Thus was established the first occupation of the country on the 4th October, 1867.

At dawn the following day a commencement was made of landing the troop horses from the *Coromandel*. Owing to the native craft bearing up the landing-stage having been swamped in the night, and the depth of water required for the laden barge being too great to admit of the stage being placed directly upon it, to save time the horses were swung off the barge and dropped into the sea, when a few strokes carried them into their depth and gave them foothold. Some troopers stood in the water and received the horses. Only one mishap occurred. Dr. Lumsdaine's horse insisted on swimming out to sea, and was drowned.

The next day the tug *Saadah* was employed in searching along the shore to the head of the bay for a better landing-place, but no position superior to that off Zulla could be found.

The watering-place at Mulkuttoo promising to be the most convenient spot for an encampment which could be obtained so long as the Reconnoitring Party kept to their ships, it was resolved by the Committee that, for the present at least, it should be adopted as head-quarters of the expedition, from which explorations of the surrounding country should be made. Accordingly Colonel Merewether ordered a general disembarkation.

The shore consisted of alluvial deposit, and below high-water mark was fortunately tolerably firm for the foot. The beach shelved so gradually to the sea, that the depth of water did not exceed five feet at three hundred yards from the water-line. The tide had a rise and fall of about five feet. The shore was covered with bushes, and until broken up with constant traffic, the surface of the ground was hard and compact. As it was necessary to excavate new wells, and to protect them from damage and encroachment on the part of the natives, the Quarter-master-General selected a stubble-field, situated on the bank of the watercourse in which the wells had been excavated, as the site of the camp. This position was distant a mile and a quarter from the

shore. The exact spot on the shore selected for landing was the southern spit of the mouth of the torrent called the Hadâs. About a mile and a half from the shore a small channel left the parent stream and entered the bay nearly half a mile to the south of the debouchure of the Hadâs. It was in this small channel that the wells had been excavated, and the reason for the selection was apparent on the first occasion when the waters of the Hadâs made their appearance. The wells were more protected from injury in the small channel than they would have been in the bed of the main torrent, which besides had a somewhat lower level. The camp, therefore, was placed in the fork of the two dry channels, the Hadâs having a width of about sixty yards, to the front and north, the small Mulkuttoo channel being on the left flank.

At dawn, on the 7th October, Colonels Merewether and Phayre, and Lieutenant Jopp, started off at daylight to examine a watering-place inland. The guides took them to a spot named Weah, situated on the bank of the Alliguddé torrent, where they found a small stream of running water. Weah was about sixteen miles from the sea-shore, the first six of which traversed a hard sandy plain covered with bush jungle. The route then led up the dry bed of the river Hadâs, which at this point had cut its way through a rocky gorge in a small range of hills.

The country then became very rough, was covered with large stones, and was cut up by numerous channels, which had been scooped out by the action of floods, but which were then all dry. The remainder of the journey crossed rough and rocky ground, necessitating great care in picking out the way. Captain Pottinger and Lieutenant Jopp were deputed to survey this route.

The natives then directed Colonel Phayre's and M. Munzinger's attention to another watering-place, situated on the river Hadâs itself, a few miles to the south of Weah. This spot was called Hadôda, and Colonel Phayre found the supply superior in quantity to that at Weah.

The next place examined was situated at the base of the Abyssinian range, eight miles south of Hadôda, at the mouth of a large gorge. A wide bed of a torrent, called the Nebhaguddé, traversed this gorge, named Komaylé. There was no running water here, but the natives had two wells excavated in the bed of the torrent, about thirteen feet deep to the water, which, they said, never failed. Colonel Phayre and M. Munzinger proceeded up the Komaylé gorge about eight miles, when they arrived at a narrow pass, having a stream of water running through it. They followed up the stream for two miles and a half, the cliffs on each side, of immense height, being almost perpendicular. This defile was

in some places very narrow, and the passage, obstructed by huge masses of rock and boulders, was most impracticable. There was a general absence of forage at all these watering-places, which the natives attributed to the dry season just terminating. When the lowland rains commenced, which the Shohos stated would soon take place, they said grass would spring up everywhere, and they would then cultivate their grain fields. When the comparatively cool season commences in the lowlands, the Shohos, who inhabit the mountains between the highland crest and the base of the range in the lowlands, bring their flocks and herds down into the plains for pasturage.

The chiefs of some of these Shoho tribes paid their respects to Colonel Merewether, and receiving small presents, with promises of more to follow should their services be required, expressed themselves as ready to assist their English visitors in every way.

While these investigations into the water supply of the country were being vigorously conducted by the Quartermaster-General's department under their energetic chief, M. Munzinger's able assistance being brought to bear upon all sources of native information, the rest of the Reconnoitring Party were fully occupied in the performance of their several duties. Upon Major Baigrie, Assistant Quartermaster-

General, devolved the duty of making arrangements for the camp, landing of troops, stores, &c., and he accompanied the troops to the outposts, and surveyed the adjacent country. He subsequently explored the Hadâs pass as far as Tubboo, which enabled him to make and to transmit to the *Illustrated London News* some of those artistic views of the mountain passes of Abyssinia, which gave so much delight to the subscribers of that pictorial journal.

The Engineers directed their energies to the improvement of the landing-place; the commencement of a pier; the clearing of a road through the jungle from the shore to the camp; and the development of the water supply at Mulkuttoo.

The senior Commissariat Officer, Major Mignion, whose subsequent services with the advanced force were so valuable, exerted himself in forming their depôts of stores; in organizing the proper issue of rations and supplies; in drawing from the people of the country all possible assistance for the benefit of the commissariat; while Lieutenants Mortimer and Hennell, of the Transport Train, attended to the welfare of the transport animals.

Surgeon Lumsdaine and Assistant Surgeon Martin, besides their professional duties, commenced a system of meteorological observations, and exerted themselves as sanitary commissioners; and Doctor

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Lumsdaine was also kind enough to undertake the duties of manager of the mess.

Lieutenant Dawes, Harbour Master, conducted the duties connected with the debarkation of stores, and shortly obtained a large fleet of native craft from Massowah, and other places, for the purpose of bringing stone from the opposite side of the bay for the construction of the pier, and to assist as lighters in clearing out the ships. He also formed the native boatmen into gangs of port labourers.

Having described the several duties of the component parts of the Reconnoitring Force, it will not be necessary to refer again to their proceedings, otherwise than in a general way.

By the 14th October, although several new wells had been excavated at Mulkuttoo, the supply of water began to decline. It has been related that the supply, when first inspected, had, unknown to the officers of the Expedition, received a temporary increase from rain having fallen in the hills. This increase began to fail, either owing to the great drain on the supply made by the force, comprising in the aggregate about 270 men and 200 horses and mules, or by the gradual filtration of the drainage to a lower level. In either case the result was the same. Strenuous exertions were made, with the aid of the detail of Sappers, and by the employment of native labour from the village of Zulla, to increase the

supply, but without any satisfactory result. Each well in itself gave but a small supply, owing to the proximity of the sea. The wells were obliged to be made very shallow when once the water stratum was tapped, otherwise the water became brackish from the infiltration of salt water. There was not at this early period any great amount of labour procurable to increase the number of wells as much as was desired; and the Sepoys of the Marine Battalion could not be spared for this work from their necessary guard duties, and employment on the pier. The absolute necessity for the speedy construction of the pier was patent to all. Under these circumstances Colonel Merewether decided to send the Cavalry and some of the Infantry to form an encampment at the running stream at Hadôda, whither they marched on the 15th October; a sufficient number of the Marine Battalion for guards and a party for the pier and wells only being retained at Mulkuttoo.

As the inhabitants of the large village of Zulla obtained their water supply from the old wells of Mulkuttoo, and of course were not now prevented from so doing, Colonel Merewether considered it very desirable, if it were only possible, to exchange their right to these wells for one or more new ones nearer their own dwellings. The native watering party so near the British Camp proved a great nuisance, and

the sentries had much difficulty in preventing them from damaging the new wells by treading down the soft banks, and permitting their animals to get into them and defile the water. To remedy these evils, a well was commenced on the bank of the river Hadâs, where it skirted the village of Zulla, three miles from Mulkuttoo; but although the excavation was continued for some time with great perseverance, it was not rewarded with success. A depth of fifty feet from the surface was obtained without water being met with, and it was not safe to proceed to a greater depth in such soft soil. The idea, therefore, of being able to make an exchange of wells had to be abandoned.

It may be mentioned here that eventually, when considerable progress had been made in the Campaign, the Mulkuttoo wells were very largely increased in number; and although from 140 to 200 tons of water were condensed from the sea for the daily supply of the large camp on the shore, the base of operations in the country, yet the wells are estimated to have supplied with water daily about 2,000 men and 2,000 animals. The original camp in Annesley Bay became shortly to be called "Zulla" after the village three miles distant, in place of the less euphonious "Mulkuttoo," and by this name it will be hereafter designated in this narrative.

On the morning of the 16th October, Colonel

Merewether, accompanied by Colonel Phayre, Captain Pottinger, and Lieutenant Jopp, rode nine miles southward along the shore of the bay, to inspect the hot springs at a place called Atsfé. The route led over the alluvial plain the last three miles, evidently below the level of spring tides, having a hard saline-incrusted surface. The water of the springs could be borne by the hand—according to some travellers, 48° Reaumur, equivalent to 140° Fahrenheit. This temperature is about the same as that of the hot spring at Gahâr situated thirty miles from the Somali coast, at Ainterrad, which I visited in 1851. The water at Atsfé was very salt, and unfit for man; but camels drink it freely, and the sulphuric and saline beverage does not disagree with them. This is not very surprising, as it is well known that men and animals can, when obliged, subsist on very brackish water. For many years the troops at Aden were compelled to drink water so salt that no stranger would touch it; and horses brought over to that station from India would not look at it for a day or two, till they were literally dying of thirst. It used to be a joke amongst the soldiers on their return to India, that the perfectly sweet water they got there was insipid after the Aden liquid, and required a pinch of salt in it to give it the proper flavour.

Colonel Merewether's party continued their

journey six miles to the southward of Atsfé till they arrived at the head of Annesley Bay, where they found a small village of a few grass huts belonging to a tribe called Rassamos. This tribe engages in a salt trade, the salt being obtained from a small lake in the peninsula of Buré, not very far from the village by name Arâphillé. Here was stationed an Egyptian outpost from Massowah, consisting of a company of 100 men, commanded by a captain, and having with them one small rifled gun. The Egyptian officer received Colonel Merewether and his companions hospitably. The soldiers were quartered in a square, fenced in, outside which a ditch had been excavated. Five wells of water supplied the detachment, one being in the ditch. The other four, together with seven others belonging to the village, were in the bed of a torrent close by.

The following information was obtained at Arâphillé. The water supply of the place was capable of increase, as when, in the lowland rainy season large herds are brought down from the hills to graze in the surrounding plain, other additional wells are dug to meet the increased demand, and never unsuccessfully. The water-bearing substratum was tapped at a depth of twelve feet. The large plain at Arâphillé, after the commencement of the rains, becomes covered with grass. In the

gorge of the mountains, which here approach very near to the sea, and from which the Arâphillé torrent flows when there is rain in the mountains, there was said to be running water all the year round. The name of this gorge was "Assâda;" and at a short distance from it there was another, called "Ooêma," which also contained running water, but it was somewhat further in the hills.

Having gained the information given above, the party embarked on board the *Saadah*, which had proceeded down the bay to pick them up, to save them the return ride in the burning sun. Unfortunately, the *Saadah*, after having proceeded some distance on her return trip, in standing in too close to the shore to pick up the native surveyors of the Quartermaster-General's department, ran aground, and the tide receding left her hard and fast. Colonel Phayre, impatient of delay, landed, and with Pottinger and Jopp walked up to camp, twelve miles, where they arrived, after their exhausting walk, too late for mess, or "garbage," as it was termed, owing to the very bad fare procurable at Zulla, and the almost total absence of vegetables.

After a little experience we found the field a disagreeable position for the camp. Much personal inconvenience arose from the furrows in the ground, the dust of the dry soil, and the presence of snakes, which could not readily be detected in the stubble.

The tents were therefore struck, and the camp was removed to a new site, distant a quarter of a mile on the opposite side of the Mulkuttoo Channel. The situation of the new camp was found to be a great improvement, the ground being, at that time, hard and level. But the heat was intense, and greatly felt in the tents, the thermometer registering at noon daily 104°, and much annoyance was caused by the continual dust storms. What with the exhaustion produced by unceasing work and exposure, the bad living—consisting of lean mutton and goat's flesh, obliged to be consumed a few hours after being killed, and uneatable potatoes—and the muddy water, too thick to be filtered, the life led by the Reconnoitring Party was not an enviable one. Nevertheless, the novel nature of the duty upon which they were engaged, the importance necessarily attached to their proceedings, the fortune of the expedition, and the military renown of the nation in a measure depending upon their ability and exertions, together with the hope of distinction in case of success, all these considerations served to animate them in their difficulties and anxieties, and to cheer them in the accomplishment of the task they considered it a great honour to have had allotted to them.

CHAPTER V.

RECONNOISSANCE TO THE SALT PLAIN.

Reconnoitring Party Established at Zulla—Explorations and Proceedings—News of the Prisoners—The Sortie from Magdala—Theodorus' Cruelty—Exploring Party Starts for the Head of the Bay—Arâphillé—A Deserter—Ooêma and Assâda Gorges—Elephants—Waterfall—Route to the South first sought for—Departure of Exploring Party—Camp at Arâphillé—The Two Craters—Travelling Economics—Wangaboo Plain—Ostriches—Antelope—Galata Jungle—Three Robbers—Indian Followers Demoralized—Robbers again—Booyé—Anxiety of Dánkali Chief—Arlet—River Dendero—Mabillé—Pass of Eroro—Ramote—Great Heat—Ragoolé—Elephants in the Oasis—A Perennial Stream—Its Tributaries—Route from the Sea—Where are the Natives?—Danâkil Fly at our Approach—Taltals—Raid of Hillmen—Ragoolé Pass—Lower Ragoolé—Below Sea Level—Intense Heat—Desolate Region—Salt Plain—Salt Lake—Salt-brick Currency—Pool of Ferora—Wild Asses—Benighted—Thirsty Troopers—Twilight—Wind versus Sun—Bivouac at Addâdo—Theodorus a Wine-bibber—Garsellogellé—Night Bivouac—Enormous Natural Reclamation from the Sea—Exhausted Followers—Steamer at Last—Francis Lost—Râsa—Village without Water—Howâkil Bay—The *Saadah*—The Poor Patient—Return to Annesley Bay.

By the 17th October the Reconnoitring Party had fairly established themselves at Zulla. The country within a twenty miles radius had been explored; the capabilities of the wells at the camp had been

fully tested; the watering-places at Weah, Hadôda, and Komaylé at the base of the mountains, situated twelve, fifteen, and sixteen miles from Zulla, had been discovered. A portion of the Cavalry and Infantry escort, not immediately required, had been sent out to Hadôda, where they commanded the Hadâs Pass. Information of other sources of water supply had been obtained at Arâphillé. The officers of the several departments were fully occupied in making clearances through the jungle, in improving the landing-place, and in landing operations generally. They were also engaged in arranging the camp, collecting and issuing stores, organizing the commissariat arrangements, and attending to the transport of provisions between Zulla and Hadôda. The welfare of the valuable transport mules, whose services in mountain exploration were so soon to be brought into requisition, was also duly regarded.

Messengers with letters from the prisoners arrived at Zulla on the 9th October. These letters contained news from Magdala up to the 7th September, and from Mr. Flad at Debra Tabor up to the 13th August. Typhoid fever was carrying off daily some of the natives at Magdala, and the prisoners were sorely pressed for money, the messengers lately sent up with supplies of dollars not having been able to get beyond Tigré. The prisoners at Magdala were anticipating an attack

on the fortress by the Wollo Gallas, a Mahomedan race, in consequence of an attack made by a portion of Theodorus' garrison upon a Galla village twenty miles distant from the fortress. This sortie from Magdala had been made owing to one of the officers of the King's treasury having absconded and taken refuge in the village. The treasury officer escaped, but the Galla chief of the village and a number of his followers were killed, and the inhabitants generally taken captives with all their cattle. The Magdala party had suffered severely on their return, the burning village having aroused the neighbourhood and brought upon them a large body of Galla horsemen, which, though unable to rescue their countrymen, killed and wounded a considerable number of Theodorus' soldiers. Mr. Flad wrote that it was generally believed at Debra Tabor that Theodorus would not march on Magdala for a month and a half; and that the King was devastating the country, and had recently destroyed by fire a town with all its inhabitants, situated on a beautiful island in the Lake Tsana, the largest lake in Abyssinia.

In furtherance of the resolution of the explorers, that the only facts to be relied on were those to be ascertained by personal observation, it was determined to investigate the water supply in the mountain gorges bordering upon the plain of

Arâphillé at the head of Annesley Bay. Information respecting these watering-places had been obtained, as already mentioned, during the hurried visit made to the Egyptian encampment on the 16th October.

The *Scinde*, which had been obliged by stress of weather to return to Bombay in September, having arrived at Zulla on the 17th October, Colonel Merewether, accompanied by Colonel Phayre, M. Munzinger, and the writer, embarked in her early on the morning of the 19th, and proceeded to the head of the bay. Our horses, and a well-bred Aden camel of Colonel Merewether's carrying provisions, escorted by a few troopers, had been despatched from Zulla at three o'clock in the morning to march round the bay to meet the party on landing. The *Scinde* in passing up the bay visited our old friend the *Euphrates*, which was anchored near the still stranded *Saadah*. The tug *Saadah* had sunk deeply into the soft shore, out of which the *Euphrates* had been unable hitherto to drag her. The *Saadah* was afterwards got off undamaged by digging out the sand around her.

Landing near Arâphillé about 8 A.M., the horses were found ready waiting our arrival; but there was no little dismay depicted upon the countenances of the party when it was discovered that the camel with the breakfast and provisions had decamped

soon after its arrival, having been carelessly let loose by its young Arab driver. As the deserter was probably some distance on his way back to Zulla, fifteen miles off, it was no use waiting till he could be brought back; so, mounting our horses, we proceeded through the salt-bushes and mimosa jungle to the Ooêma gorge, about two and a half miles from the shore. Finding this gorge to be very narrow and impracticable, owing to the masses of boulders and thorny bushes, and the guides stating that the water in the ravine was two or three hours distant, we deferred its examination, and our party proceeded three miles south to another ravine, by name Assâda. Tracks of elephants were seen in all directions, and the party expected to fall in with them every minute, and were well prepared to do so; but they had not the good fortune of the Captain of the *Scinde*, who, landing for the innocent sport of shooting guinea-fowl in the bushes lining the shore, and seeing his native guide pointing in considerable excitement towards a bush, which he hoped sheltered some of the game he sought, ran round it at best speed and nearly cannoned against a fine specimen of an elephant! A gun loaded with small shot being scarcely a weapon for such an antagonist, our friend the captain tacked in haste. He afterwards recounted the story to us with great naïveté.

The Assâda gorge and ravine was found to be of much larger dimensions than that at Ooêma. The watercourse at the bottom of the ravine had a breadth of about fifty feet, and was overhung by precipitous cliffs, apparently about 800 feet in height. The bed of the watercourse up which we ascended was very rough, obliging us to dismount and proceed on foot. After following up the ravine for two miles and a half, a dirty puddle of water came in sight, and at this spot a huge boulder of granite, the size of a small house, blocked up the way. The native guides stated that the water pool was further on, and with very great difficulty, scrambling and falling about, the horses were got past the impediment, and half a mile further up the ravine came to an abrupt termination at a waterfall. A small stream fell from a narrow ravine above our heads over a perpendicular rock some fifty feet in height. The water did not run beyond the pool at the foot of the rock; but it was a pleasing and refreshing sight to see even this small reservoir and its silver thread-like feeder. The height of this pool above the sea was 520 feet; and the project for bringing down the supply to the sea-shore at Arâphillé by means of piping was considered and held over for future adoption, should circumstances require it. As it was now noon and extremely hot in the enclosed ravine, and our breakfast was supposed to

have fallen to the lot of others, our party rested in the shade under the boulder, which was the size of a modern villa, and contented ourselves, perforce, with some bread which had been obtained from the steamer. About 3.30 P.M. the return trip was commenced, and a walk of six miles brought the party to the shore, when they immediately re-embarked in the *Scinde*, and half famished, once again, owing to Captain Westbrooke's hospitality, partook of food, which, by comparison with the "garbage" mess at Zulla, appeared fit for an aldermanic banquet.

The lowland country to the west of Annesley Bay having been fully explored, the time had arrived when it had become imperative to fix upon a practicable route for the British force to ascend by into Abyssinia. Native information, obtained through M. Munzinger, pointed to the thorough examination of the ravines of the Hadâs torrent leading from Hadôda to Tekoonda on the highlands, which had already been explored by Major Baigrie as far as Hamhammo; and of that of the Nebhaguddé from the gorge of Komaylé to Senâfé in Abyssinia, explored by Colonel Phayre and M. Munzinger up to Sooroo. But these ravines appeared to ascend so far to the northern limit of the highlands, and, consequently, at an extreme distance from the objective point Magdala, that it was considered advisable

that the lowland country to the south of Annesley Bay, and the base of the Abyssinian range in that direction should be examined; as, in case a practicable route could be discovered to the south, a great saving of distance would thus be gained. With such a southern route it was not at all improbable that Howâkil Bay might be found a more convenient point of debarkation; but even if this were not so, there was no reason why the plain of Arâphillé, which provided water from wells, and within six miles of which situation there was a running stream of water, should not be made the base of operations in the country. Annesley Bay was equally common to both Zulla and Arâphillé, and the latter place was a march nearer Magdala. Besides, had not M. Munzinger spoken with much rapture of the oasis of Ragoolé on the banks of a river which lay much further to the south? And was it not certain that the mountain tribes had a route from the Salt Plain to Abyssinia?

The above considerations determined Colonel Merewether to make a rapid reconnoisance to the plains to the south of Annesley Bay. Accordingly, the horses and mules having by this time thoroughly rested, and got over the effects of their long sea voyage, preparations were made for a start on the 21st October.

At 3 A.M. on the day fixed for departure, the

Zulla Camp was roused by the noisy preparations made to load some fifty mules with provisions for the party, and grain and forage for the horses and mules. Whether the hyenas on this morning had managed to procure a good feast off some unfortunate mess-sheep, as three of these night-marauders had managed to do a few nights previously; or whether in anger at being disturbed in their endeavours to circumvent the mules, it is difficult to say, but their laughter was so supremely ridiculous, that even the sedate Hindoos, busily engaged with the mules, could not resist roaring in response.

The party, consisting of Colonels Merewether and Phayre, Doctor Lumsdaine, M. Munzinger, and the writer, attended by the Chief of the Danâkil and one or two of his friends, embarked in the early morning on board the *Scinde*, and proceeded down the bay to Arâphillé, where we found the horses and baggage mules had just arrived from their march round the bay, escorted by a dozen troopers. We took up our position a little distance from the Egyptian encampment, about a mile from the beach, and very shortly the two small sleeping tents we had brought with us were pitched upon the open plain, the jungle not being sufficiently large to afford them the slightest protecting shade. The sides of the tents were tilted up so as to admit any chance breeze, but, in truth, the heat, over 100,° and

the stagnation of the air in a plain almost encircled with high mountains, rendered our position nearly unbearable, and presented conditions altogether unknown in ordinary picnics.

The plain of Arâphillé, bounded on the north by the bay, and on the west by the Abyssinian mountains, is shut in to the east by a range of hills which, encircling the bay on the side of the peninsula of Buré, runs parallel to the highland chain. It rises here and there into lofty peaks, and intersects at right angles some of the lower spurs of the Abyssinian range, which project far into the lowland country. These advanced spurs do not reach as far as the Red Sea shore, but terminate in isolated mountains which look like islands in the desert. Doubtless these mountains were islands once, but the sea has given place to land.

Having previously visited the ravines on the west, so soon as the glowing sun sank behind the towering peaks of Abyssinia, our party sallied forth to ascend the eastern hills, and after a steep climb, a fair view of the bay and plain was obtained at a height of 570 feet. After taking a series of observations of the Zulla anchorage, mountain gorges, distant peaks, and other points of interest, we followed the crest of the range for some distance, and presently saw below us, eastwards, two small extinct craters of volcanoes. These craters, about

a quarter of a mile each in diameter, were quite perfect in form. Semispheres of the same diameter would have exactly fitted the bowls; and the encircling walls were not broken or rent in any way. So many objects of interest presented themselves that the sun had set, and the short twilight of the tropics come to an end, before we commenced retracing our steps. Our descent became a scramble over loose boulders, sheet rock, and other obstacles to progress, a light in the distance at the tents being our only guide.

The heat of the climate was too great to permit of our dispensing with tents altogether, but to save carriage as much as possible, camp-chairs, tables, and sleeping cots were all left behind at Zulla, a rug serving as a dining-table, and blankets on the ground as beds. Colonel Merewether, Doctor Lumsdaine, and M. Munzinger,—le Consool, as he was always called by the natives, who held him in the greatest respect,—occupied one tent, Colonel Phayre and I the other. After this fashion, with two meals a day,—breakfast after our march any hour between 10 A.M. and 2 P.M., and dinner at sunset,—we lived during our explorations. Occasionally for a time we were obliged to abandon our tents to save the transport of the forage of the mules which carried them.

Arrangements having been made for an early start, at 3 A.M. on the 22nd October, the horses and

mules were all fed, and by 4 A. M. the latter were ready to march with their allotted burdens of provisions, forage, and tents. The Havildar commanding the escort of native cavalry was placed in charge of the baggage, and Colonel Merewether adopted the excellent plan of never leaving the camping ground until the native officer reported that the baggage animals were loaded and ready to start. Thus the whole party, officers, men, and baggage, all set off together, and the baggage, being on mules, was seldom separated from us during the march by any considerable distance. One hour was required and always allowed for packing the tents and kit, and loading the mules.

At 4 A.M. our party marched southwards from Arâphillé, in the moonlight, for a watering-place called "Booyé." M. Munzinger, calculating as nearly as he was able from the native chiefs' description by the sun of the time it would take to reach our destination, stated his opinion that the distance would be about twenty miles. After proceeding one mile over a sandy plain, we came to some very rough ground, and the moon, being low, soon ceased to give her aid. Here the progress of the party was much impeded by the rocks; as, if there was a cattle-track, it was too dark to find it. The horses floundered about, threatening to fall over some impediment every minute; and with much

satisfaction we shortly emerged on to a plain of burnt up grass as level as a bowling-green, free alike from bushes and stones. Here, as was Colonel Merewether's practice, a halt of half an hour was made just before day-break in order to allow the baggage to come up, the first hour's march of baggage animals, if starting before dawn, always causing some delay. Dismounting from our horses, we threw ourselves flat on our backs, and using our helmets as pillows, took a hasty sleep. The half hour was just over, when the baggage mules came up; and, mounting our horses, we resumed our march just as a gleam of light became perceptible in the east. The plain, about four miles in length and breadth, still continued perfectly level and open, a thick jungle appearing to the south and east of it with hills beyond; while on the western margin the mountains rose up with precipitous abruptness. Having crossed this plain, named "Wangaboo," within half a mile of the jungle through which our course lay, we observed a number of ostriches disporting themselves on our right front, the male birds with their black plumage, their wings tipped with the lovely white feathers English beauties prize so much, running, as is ever their wont, after the females of their party. The females, coy, tripped away in circles from their male guardians, the whole being so engrossed in their sport, that, unlike the

wary bird in general, they took no notice of our approach until we came within three hundred yards of them. Another party of these very undomestic fowls were having a game of romps on the other side of the plain; but on our hastily dismounting to get a long shot, the whole took alarm at our strange intrusion upon their hitherto secluded territory, and made off for the jungle at a tremendous pace, leaving a solitary doe antelope, which had been quietly feeding in their midst, to make our acquaintance if she thought fit. The whiz of a bullet past her head was a sufficient hint to make her, too, retreat to the jungle; and on our entering its margin we saw a large herd of antelope feeding amongst the thorny mimosa trees. Where there was so great a dearth of provender, the occasion of replenishing it with venison was too good to be neglected, so Colonel Phayre following up some of the antelope in one direction, his companion commenced stalking the main body. Picking out the largest buck, which was of a darker fawn colour than the others, I got a shot at him at seventy yards. Apparently unhurt, the antelope bounded off with the rest of the herd, and I had much difficulty in keeping him in sight. The herd, merely astonished at the report of a gun, which they now heard for the first time, soon halted, looking back to see what had disturbed them. Pushing forward under cover of the trees, I was

WANGABOO PLAIN & GALATA JUNGLE

fortunate enough to catch a glimpse of my old friend the buck; and getting up within sixty yards gave him his second barrel. Mortally wounded, the antelope staggered off a few yards, and then fell over, and on coming up to him, it was surprising to find that both bullets had gone through him, just behind the shoulder. This buck had annulated horns about a foot in length which curved backwards, and at the extremities turned sharply forwards and inwards, forming hooks. The front face of the handsome animal was of a dark chocolate colour slashed with a white streak on either side, a second similar stripe crossing the brow down the cheek towards the nose. The whole party having marched onwards, I had some difficulty in finding in the sand the tracks left by the horses and mules on their way through the thick jungle. Forcing a passage through the trees as quickly as the wait-a-bit thorns would allow, I soon caught up the rear-guard. A baggage animal sent back for the buck shortly returned, and the march was resumed.

The Galata jungle, through which we were now wending our way, was of the vilest description. The ground was soft and sandy, and cut up with innumerable water channels, all dry; and the thorny acacia trees grew so closely together that a direct route could not be taken through them. Guided by the tracks in the sand, my lead of a few paces

gradually lengthened out; and at last thoroughly tired of pulling up to allow the mules to keep in company, their pace in the soft sand being necessarily slow, I gave directions to the troopers not to delay more than was absolutely necessary in getting up to the next encampment. I then allowed my horse to walk his best pace after my now distant companions. The march soon became most trying: at one moment losing sight of all foot-marks in patches of hard ground; at another getting my helmet knocked off, and my clothes ripped by the thorny branches of the acacias, the heat of the sun all the time being intense and untempered by a breath of air. Here descending into loose sandy torrent beds, there scrambling up stony banks studded with thorns, the side of my face turned to the sun became painfully burnt, and the jungle, too thin and low to give shade, seemed interminable. For hours I thus wandered through this wood till, when turning dreamily up a large torrent bed with a hazy idea that the direction was right, but that the hoof-tracks seemed to point the reverse way, I rounded a large tree, and suddenly came upon three natives sitting on a bank armed with spears and swords, and having shields on their left arms. Not much liking the look of my company, but suffering from thirst, I guardedly abstracted my pistol from its holster and pulled up. Robber number one making an unpleasant movement I

covered him with my pistol, when he resumed his original posture. Making signs that I wanted water, the three shook their greasy heads, whereon I carelessly dandled the pistol in the direction of robber number two. Robber number three then laid down his weapons, and retired behind a bush, from which he abstracted a skin containing a fluid, which, when poured into my waterproof cup looked much as if it had been tapped from a scavenger's cart. I declined the uninviting refreshment; and, in return for the compliment, poured out the little sherry I had still left in my flask and offered it to villain number three, who looked at it from every point of view, and again shaking his greasy head, shied at it, with "poison" depicted on his roguish countenance. Just tasting it myself to inspire confidence, I handed him the cup, which he now emptied into his mouth, and making a grimace like that of the dog-faced baboon of the country, spat out the valuable contents with a gesture of supreme disgust. Todd Heatley's best sherry spurned by a Dánkali! While thus attempting to beguile the attention of my dusky friends until the closing up of the troopers should relieve me from the highly interesting interview, the escort had been obliged to halt with their party to rest for a time; so giving them up, and clicking the lock of my pistol, I backed my horse a few paces, and was away in a moment.

When, later in the day, some of the followers, overcome with heat and fatigue, lay down under the trees near the edge of the jungle, these three same Danâkil attempted to rob them, and a dusky Indian, though stalwart knave of mine, just awoke in time to save my rifle and his own throat.

At last the extensive jungle came to an end at a range of hills which crossed the lowlands at this point. Following my friends' tracks up a steep acclivity, covered with rocks and stones, most disagreeable walking for a horse, I at last reached an elevated stony plain with only a few trees dotted on its surface, the rocks, of volcanic formation, being black with the heat of the sun. Here I found the Indian lascars and followers had completely given in, overcome by thirst, fatigue, and the intense heat. As I passed groups of these men lying disconsolately under the scrubby trees, I encouraged them to get up and follow me, as, I informed them, the march was just at an end. Some trudged on for a few paces and then gave it up. Others called out from under the trees for water; and it was apparent the poor fellows required help. They had all been provided with skins of water; but the thirst engendered by the trudging for hours in soft soil, and the great heat, exceeding that they were accustomed to in India, had caused such a constant recourse to their supply that it was soon exhausted and they were

thoroughly done up. "Theodorus" paced along bravely, but although I had felt sure the next camping-ground could not be far distant, and had endeavoured to cheer the unfortunate Indians with the intelligence, yet four long miles of this dreary mountain only carried me to its southern margin. But the longest lane must have an end; so descending by a steep cattle-track into a rocky gorge in the Abyssinian mountains, I found at 1 P.M., after nearly a ten hours' ride, the rest of the party reclining resignedly under some poor-looking trees waiting for breakfast. Colonel Merewether, on receiving my report of the condition of the followers, immediately sent back some mules with water, accompanied by the native chiefs, who found robbers one, two, and three, quietly furnishing themselves with arms at the expense of the demoralized Indians.

The halting-place, by name "Booyé," was a watering-place in a gorge of the mountains, similar to the Komaylé gorge, only much smaller. There was no running water at this place, only one well, excavated in the torrent bed, about eighteen feet in depth. From this well the troopers and muleteers on my arrival were eagerly struggling to get water for themselves and their thirsty quadrupeds. Colonel Phayre had shot his antelope, and the party had gone on slowly expecting, they said, that I would rejoin them every minute. It was fortunate for the

followers that in this instance I had been delayed, as already recounted; but it proved the impolicy of leaving the line of march for shooting; and from this time forward our party never again separated in the same manner. The inconvenience likely to arise from leaving the line of march to follow up game, which, in the above instance, caused me to wander alone for hours through a dense jungle, guided only by foot-tracks, is terribly enhanced if the sport be successful and the game heavy. The lascars and followers all turned up in the afternoon, refreshed by the water sent to them, and we had venison enough for those who partook of animal food. After getting some breakfast at 2 P.M., and having a rest, the gorge was examined; but it was only a watering-place for the natives and their flocks. Booyé is 870 feet above the sea, but the water had a very unpleasant twang about it. For the second time, Colonel Merewether's Arab camel-driver let his animal loose through carelessness, when it ran off, and the youth was sent in pursuit. He followed it up vigorously while in sight, and then quietly lay down under a tree and went to sleep, where he was found by the Dánkali Chiefs, who reported the circumstance. This was too much; so the young fellow received a flogging. The Chiefs were very anxious in the evening for the safety of the mules against such fellows as the three rascals already

described. For, although the members of the several tribes obey a common law, that the engagement of the services of their chiefs, which is a mutual benefit to themselves, requires their respect; yet the levy of the black mail does not with them, as with more civilized robbers, absolutely ensure safety from extraordinary pillagers. However, no attempt was made upon the mules during the night, the steady tramp of the sentry giving proof of watchfulness in the little camp.

Rising at 4 A.M., we marched out of the Booyé gorge at 5 o'clock the next morning. Our guides took us for seven miles down the rocky bed of the dry torrent leading from the ravine. If variety be the cause of interest in travelling, then this Booyé torrent route must be considered as pre-eminently deserving of notice; for masses of boulders, rocks, and stones, of every size and form, had to be evaded and stumbled over in the waning moonlight, and in the interval of darkness which preceded dawn.

The alluvial conglomerate in the banks of the water-course was in some places deeply cut through by the action of running water, presenting a very curious appearance, and revealing successive layers and strata of boulders, sand, and silt. Here the original deposits brought down from the mountains had been deeply scoured out by succeeding streams.

In some places masses of hard black cindery clay ran along the banks in ridges, or peered up from the plain; as if the highest peaks of volcanic craters formed in long ages past, had been engulphed in debris from the hills and afterwards become bared by water torrents, or had not yet finally disappeared before the rising plain.

At last, quitting the torrent bed, our course turned to the south over ridges and plains of loose stone. A few natives, with a small flock of sheep, were seen as we quitted the river bed; but the whole country was a mass of cinders. The basis of the Abyssinian mountains, which were skirted the whole way on our southward journey, consisted of volcanic rocks, destitute alike of trees and vegetation, and blackened by the scorching sun. This was a dreary march over the most uninviting country, no thorny jungle even finding nourishment on the desert land. After a march of about eleven miles, the guides led us up a small ravine, where we found a pool of water, which looked quite out of place, but was, nevertheless, very acceptable. The whole party, men and animals, refreshed themselves during a short halt made at this watering-place, called "Arlet," and the march was then resumed for four miles further. The route crossed a considerable water-course, piles of tree trunks and branches brought down from the

higher mountains and embedded in different parts of the dry channel, proving the force of the stream when it chooses to flow. Towards the conclusion of the march, the native guides led us into the bed of a very large river, several hundred yards wide, by name "Dendero." This river-bed, like all we had hitherto seen, was perfectly dry. On following it up for some distance we found a small pool a few inches wide with a few bushes about it. This small watering-place, by name "Mabillé," was to be our camping-ground for the night; and a dreary place it was, the water itself being bad and scarcely drinkable. Mabillé is 580 feet above the sea. There was no forage, and only a few natives were seen during the day.

At 5 A.M. the next morning, we marched by moonlight down the bed of the river for a short distance, and our guides then turned suddenly up a steep bank, which our horses could with difficulty climb. Surmounting the ascent, a cattle-track, still rising, was found to wind round a narrow and deep ravine, which contained large quantities of white quartz. After a climb of about three miles, we emerged on to the saddle of the pass of Eroro, and found it to be 1,300 feet above the sea. Here we halted to allow the baggage mules to come up, when we commenced the descent on the southern side. The guides led us over stony spurs and very rough

ground into a water-course at the lowest side of a circular valley or bowl, which was apparently completely surrounded by lofty black cindery hills. The camp, as on the previous day, was pitched by a small pool of water in a dry water-course, a little grass and a few bushes marking the spot. Here, the water was found to be very bad, quite mephitic; and most of the party, not excepting a native guide, suffered in consequence of drinking it. The thermometer at this vile place registered not more than 101° in the shade at noon; but the day was the hottest hitherto felt, owing to the perfect stagnation in the air caused by the encircling hills. On our descent from the pass of Eroro to our new camp at Ramote, 480 feet above the sea, very curious blocks of white quartz lay strewed about. These blocks were so pure and opaque that they were at first supposed to be marble; but the peculiar glistening appearance of quartz revealed their character.

The air was still hot when we left Ramote at 5 A.M. the following morning for our next camp, which was to be at Ragoolé, M. Munzinger's oasis in the desert. Our march this day was a short one of eight miles, the country traversed being of the same dreary, rocky, and cindery character as that hitherto travelled over, which was destitute of forage, and only provided bad water at the places where we had pitched our camps. The route this day led us over

stony plateaux, and finally, by a descent, to Ragoolé. As we rode in silence towards the last rise overlooking the valley of Ragoolé, the heat of the morning became positively sickening, and the stony track requiring constant attention to prevent our horses stumbling and bruising their shins, was most wearying. Feeling inward disgust at the hitherto fruitless journey, somewhat depressed in spirit though determined to persevere, we little supposed at this point that any excitement was at hand. On looking down into the valley, which was clothed in green at the bottom, a sight gladdening to the eye, we perceived a large bull elephant with a female and three young ones feeding quietly about three hundred yards off. Unfortunately, as we stood quietly looking down upon the elephants, and endeavoured by signs to attract the attention of our rifle-bearers, who were lagging behind, the troopers, seeing something going on in front, came up to us at speed, their steel scabbards and other accoutrements making such a noise as to thoroughly alarm the game, which had hitherto been unconscious of our proximity. The elephants were making off at great pace as we hurried down the valley, quite unsuspicious of the serious impediments to progress in our way. Arriving at the bottom, we endeavoured to cross through the reeds and bushes, but becoming entangled in muddy water channels, we were

obliged very reluctantly to give up the chase, and the elephants got off scatheless. Disappointed with our failure, and scarcely able to speak from thirst, we sat down under the bank of a real stream, twelve feet wide, and a foot in depth. The heat was very great; but after the miserable water supply at our late encampments, the rippling stream of Ragoolé was indeed a delight. As there was no shade sufficient for our tents, they were pitched on the gravel between the junction of the two streams. Here was indeed a comparatively pleasant spot at the base of the Abyssinian chain, two or three perennial streams uniting at Ragoolé and forming one small river. This river at Ragoolé is not simply a mountain torrent, although its bed was much smaller than many of the dry channels we had crossed, but a perennial stream fed by inexhaustible fountains in Abyssinia. As far as we afterwards discovered, there were five streams rising in Abyssinia which flowed towards Ragoolé. Four of these, the Mai Muna, Mai Musrub, another near Focâda, and the stream of the Umbaito valley, united near the edge of the highlands, and ran through a deep ravine to the lowlands near Ragoolé. Colonel Phayre learnt that this stream was called by the natives the Mai, or River Endaylé. The fifth stream, which formed a junction with the Endaylé in the lowlands near Ragoolé, came from a ravine near Adigerat; not

from the very deep ravine to the east of the British entrenchment at that post, which was quite dry when we saw it in December, but from another smaller ravine not far from the large one, which contained a good supply of water in the same month. The river Ragoolé is supposed to receive the waters of other tributaries besides those mentioned, and although it is worse than useless to form conjectures on geographical subjects, most, if not all the facts given above may be relied on. The water of the river Ragoolé was found to be good, and its banks were covered with grass, but, after all, the quantity was small compared to the requirements of the British expedition. A thousand transport animals would have cleared off all the forage in a week.

Although the thermometer registered 105° in the shade at noon, Ragoolé appeared to us to be the coolest place we had visited *en route*. The troopers and followers were charmed with the flowing water, and swallowed immense quantities of it to make up for lost time. The bathe in the evening was delightful, and we only longed for the possession of such a stream at Zulla.

At Ragoolé, 470 feet above the sea, we had reached the object of our exploration. Situated seventy miles south of Zulla, this little oasis in the desert was so much nearer Magdala. The native

chiefs said that the highlands could be ascended up the valley down which the stream flowed; but, before exploring this route, it was necessary to be sure that Ragoolé itself could be reached from the sea; for no army, or even small body of men, could with safety travel by the way we had come from the south of Annesley Bay. The very first march from Arâphillé to Booyé of twenty-one miles, over a most fatiguing soil, was considered beyond what European soldiers could accomplish with safety in such a scorching climate. At least, such a march, if not beyond possibility, would be attended with much danger; and even with additional wells at Booyé, where the water was just drinkable, the thirty-three miles of desolate country which intervened between Booyé and Ragoolé, which was nothing better than a blackened waste, and which did not contain any water fit to drink, would put the lately traversed route out of the question. At Ragoolé we had reached a point far south of Howâkil Bay, and even of the Bay of Amphilla; the small port of Edd being almost in the same latitude. We were aware that a direct line from Ragoolé to Amphilla Bay crossed the dreaded Salt Plain, and perhaps the Salt Lake also; consequently, our nearest practical point on the sea-coast would be at Howâkil Bay, some fifty miles distant in a north-easterly direction. On the feasibility or the

reverse, therefore, of a route over this space of fifty miles, would depend the practicability of a southern route *viâ* Ragoolé; the only spot in the lowlands possessing what could properly be called a perennial river. With a practicable route to Howâkil Bay, then, the valleys of the River Ragoolé to the highlands would require investigation. We at first thought of hunting up the elephants, but our business was of too pressing a nature to admit of any unnecessary delay. Accordingly, although loth to leave our encampment on the banks of the stream, we determined to march the following morning.

It had been a matter of considerable surprise to us that no native village had been found at the stream, nor even had any natives been seen during the day. This was explained in the evening when three Danâkil, having summoned up courage on seeing their chief with our party, came into camp. These men related how they and their people had watched our arrival in the morning, and, being much alarmed at the appearance of our armed party, had fled to the hills for security, taking their families with them. Our visitors were most grateful at receiving a small present of rice, which loosened their tongues, and we obtained a good deal of information from them. They said that the reason why they did not erect their huts near the stream was, that they dared not do so owing to the attrac-

tion which would thereby be afforded to the Taltals and hillmen in the adjacent mountains. A mountain tribe, they said, had only very lately attacked an encampment of their tribe at Ragoolé, when their people were murdered and their cattle carried off. They added that they had to keep a constant look out for enemies, and lived in terror for their lives. Poor wretches! What an existence for any human creatures to pass through! Their country, a parched desolate region; their climate, an intensified perpetual equatorial heat; their rainfall, one or more terrific thunderstorms in the year; their occupation, tending scanty and wretched flocks and herds of lean kine, and watching the approach of enemies; their fears, always alive for sudden death; their hopes, for peace only. It is, perhaps, fortunate for these Danâkil that they know of no better life in the outer world, and more than probable that they only suffer through weakness, and if more powerful would, doubtless, conduct themselves like their neighbours. But it was impossible to help pitying their abject condition in this vile land.

A delightful bathe in the stream at sunset; some tough fare eaten by the light of a ship's oil-lamp, considerable experience having been, by this time, gained in achieving that posture at picnic feeding which caused the least amount of cramp, and a discussion of the morrow's plans over a pipe, sent the

party to their rugs at an early hour. The truth of "Brown's" remark to "Robinson" came home to us daily. "You don't know how nice it is when once you are up," for the early morning was the most enjoyable, or rather least disagreeable part of the day, and was generally passed, to avoid the heat as much as possible, in floundering by moonlight over rocks and boulders; making descents into darkness, with one's head almost touching one's horse's tail; ascending slippery narrow paths holding on to the mane, with boots grinding against the rocks; or else plodding dreamily over stony plains. But the cigar and briar-root pipe produced contentment, and imparted a neutral tint to the imagination, blending all colours of thought into one even shade.

Rising at 3 A.M. the next morning, we started at 4 o'clock, making our way down the Ragoolé stream, which shortly entered a narrow gorge in a range of hills running parallel to the main range. Although we had the benefit of a good moon at starting, the sides of the defile, through which the stream wended its way, were so steep as to shut out the moonlight. The pass, about fifty yards in breadth, trended in a direction a little north of east, the mountains on each hand being composed of basaltic rocks of varied description. After the first scramble at the entrance, the floor of the defile im-

proved in character, and the stream winding through it imparted a somewhat cheerful aspect to the march. After four hours' progress through this narrow pass, crossing the stream about forty times, and making one short halt to allow the animals to crop the small quantity of grass which here and there appeared in the dismal ravine, the defile widened out to a hundred yards, and at the end of the thirteenth mile the Ragoolé River debouched into an enormous plain of the most sterile character. At the mouth of the gorge at this eastern end, cliffs composed of indurated sand and silt, exposed in section for a depth of some sixty feet, gave evidence of the manner in which the river had first brought down the deposits and subsequently cut its way through them to the plain beyond; and having aided in its formation, was now helping to raise it. This plain had not the appearance of the alluvial plain at Zulla, but was more sandy, and the only vegetation visible on its surface was that on the very margin of the stream itself. Following the stream down in a south-easterly direction for nearly three miles in search of a shady place, the camp was pitched on the bank; but the shade was insufficient to cover even the smaller tents.

The plain itself at Lower Ragoolé, as it was called, was the very picture of desolation, far worse than anything we had as yet beheld. The River

Ragoolé itself appeared out of place in such a desert, and the green bushes which lined its banks only rendered more dismal the apparently unlimited plain beyond it. On taking the height, or rather depth of our camp, we found it to be 193 feet *below* sea level. This was a significant fact. The thermometer registering 110° in the shade but faintly expressed what the heat was at this frightful spot; for a scorching wind drove over the plain drying the skin to parchment, and rendering the daily work of plotting our route and recording our proceedings somewhat burdensome. It was no little comfort to the native Indian troopers and followers under these circumstances to have a stream of water to quench their thirst and bathe in. A native of India will go through a great deal of hardship if supplied with water; but he soon gives in at such places as the waterless plains of Galata and Wangaboo. How the antelope and many other wild animals exist without water is a mystery; but many species of antelope are designed by nature to require no water. Elephants are only temporary visitors in the low-land plains, and they do not seem to care for any amount of heat either in Africa or India; moreover they travel with ease long distances to obtain water, which is absolutely necessary for their existence. Few animals of other species than those mentioned are met with on these Southern lowlands. We had

been much surprised at finding tracks of elephants the whole way from Arâphillé to Ragoolé, but they were old, and a small herd which had been seen from the *Scinde* bathing at the head of Annesley Bay, had evidently been a reconnoitring party in search of the food they were sometimes accustomed to find in the Wangaboo jungle. But the lowland rains having failed this year in putting in an appearance, the elephants were supposed to have quitted the country in disgust; and we were about to follow their good example.

M. Munzinger, who was always a most useful member of our party, and ever in the pursuit of information, now obtained from the native chiefs the pleasing intelligence, that the next watering-place on our way to the coast at Howâkil Bay, could not be reached under a march of twelve hours. Colonel Merewether reckoning that this meant thirty miles, and perhaps more, was aware that it was next to impossible to make so long a march at one stretch in such a climate. Accordingly, instead of marching as usual in the early morning, he decided that it would be absolutely necessary to start from Lower Ragoolé at mid-day, and making a bivouac during the night at half-way, complete the distance to the watering-place the following morning. With a view to carrying out the above-mentioned plan orders were issued for a whole night's rest at our camp by

the stream; and after bathing in the water which was quite warm, and somewhat languid with what we had undergone during the day, we were quite prepared for a longer sleep than usual. However we were disturbed in the night by a crackling noise among the bushes, one of the party who had seen traces of elephants near the tents imagining the disturbance to be caused by those animals. On proceeding to the spot, a far-seeing Hindoo follower collecting fuel for his next day's meal was found to have produced the commotion.

The River Ragoolé then flows on to a plain very considerably lower than the level of the sea. It was therefore evident, that although strange things do happen, yet, as there is no instance recorded of water running up hill, excepting under pressure, this river did not do so, in spite of some speculative maps marking down the course of such a stream making its exit into the sea at Amphilla Bay. The statement of the natives on the subject was, that the Ragoolé River after running for some distance into the plain disappeared in the sand, and this was not surprising; for these boundless sands would be well equal to its speedy absorption in such a climate.

At noon the following day, the 27th October, the tents were struck and the convoy of mules loaded; and at one o'clock, in a scorching wind and sun, the party marched down to the stream and

followed it up for a mile in order to let all the men and animals have a final satisfactory drink before striking over the plain. Every water-skin, bottle, and vessel capable of holding fluid, was put into requisition; and all, indeed, were needed, for the troopers, lascars, grooms, and other servants, all got to an end of their supply before a halt was made for the night. The Chief of the Danâkil and his companions, acclimated to these regions, and never appearing to suffer from thirst, stepped out briskly over the arid plain, which, apparently affected by infiltration, presented a tolerably firm surface for the foot. We were not above tying towels over our white helmets to shade off the direct rays of the sun, which were most scorching; and our Arab horses, which had hitherto borne the heat unflinchingly, and never seemed to care much for it, this day drooped their heads and plodded mechanically over the desert. After two hours' march a white efflorescence on the surface of the ground, which glistened in the sun, told us that we were on the confines of the Salt Plain. The line of march we were pursuing crossed the head of this plain, which, at a short distance from where we were then journeying, becomes a salt marsh, and then a lake with a thick incrustation of salt on the surface. From this lake the Taltals cut out blocks of salt, and supply all Abyssinia with the needful commodity.

A.Rolfe del.

M&N Hanhart imp

SALT PLAIN

Cut into blocks like scythe whetstones, it is used as currency, forty to sixty blocks usually going to the dollar, worth four shillings and threepence. Indeed, dollars are not always prized in Abyssinia above salt, for Harris mentions that an Abyssinian in Shoa, who had sold a horse to a neighbour for fifteen dollars, having been paid in silver, sent to the purchaser to say that if they had any further dealings he should expect to be paid in salt. Fifteen times sixty makes nine hundred, about four or five donkey-loads in salt bricks. Horses, therefore, in Abyssinia may be said to be worth their weight in salt.

The sun was getting low as we approached a range of hills on the northern margin of the Salt Plain, which was here quite white from the incrustation of salt. Shining gypsum ridges bounded the north-east; whilst on the west the setting sun, as if to pursue us to the end, poured its fiery rays in blinding splendour on to the crystalline plain. The guides pointed out a small hole, at the base of the hills we were about to ascend, as containing water. A short halt was therefore made at this spot; but the hole only contained a little muddy water, from which three or four men could scarcely extract enough liquid to refresh themselves. Yet even this dismal watering-place was dignified with a name, and was called "Ferora." The hills now to be ascended

were so covered with blackened rocks and stones of volcanic origin, that, being anxious to save our horses, we dismounted and climbed the steep ascent on foot. As the summit of the rise was attained, hope that climbing for that day was at an end vanished, for beyond appeared a still higher elevation, on surmounting which still another rose up before us. The ground was so bad that our horses had to pick their way most carefully; and as each rise was succeeded by another, the sun having set, and darkness rapidly approaching, our anxiety to reach our destination on the sands on the opposite side of the range became great. Doctor Lumsdaine, and M. Munzinger on his active mule went on ahead to explore, while the rest hung back to keep in company with the mules now carrying very reduced loads, but much impeded in their progress by the rocks. The moon, being in its last quarter, and, therefore, a morning moon only, and our great friend in the morning marches, was of no use now. We were afraid we should be forced to remain all night on this heap of cinders, which, extraordinary to say, had its occupants; for we observed numerous tracks of the wild ass, and here and there the tufts of a very peculiar kind of grass, on which they may have fed. The short twilight waned into night as we reached the margin of a precipitous descent into the sandy plain below; and it was so dark we could

not find the track. Munzinger, Lumsdaine, and the guides, had disappeared altogether; and while exhausting our lungs in vainly shouting in the direction they were supposed to have taken, the troopers with the baggage-mules and drivers came up, but failed, owing to the darkness, in finding any signs of a track. At last a guide returned, and, lighting the ship's lamp, we managed, with the greatest difficulty, to lead our horses down the precipitous side of the hill, which consisted of huge masses of broken rock. How the horses got down this awful staircase, each step being from two to three feet in depth, it is difficult to say. The roughest ground we had hitherto met with in this volcanic country had been as a level plain compared with this descent, where every moment the sagacious Arabs threatened to fall headlong over us. At length, we arrived at the sandy plain; but the troopers and baggage-mules were all above. The plain was dotted over with bushes of dried bamboo grass; we, therefore, set fire to some of them as a beacon to the party we had left behind us. The blaze of light thus caused, which was reflected on the rocks, supplemented by as many lanterns as could be mustered, enabled our troopers, with their horses and the mules, to descend in safety. The sand was dry and loose, and formed an easy couch for the repose of men and animals pretty well tired out

with the day's work; and the bamboo grass was readily devoured by all the animals; but there was no water. The troopers reported that there was none left for themselves or their horses, and Colonel Merewether was forced to tell them that they must go without till the termination of the next day's march. They had been fully warned they would get no water that night, and yet they had chosen to empty their water-buckets on the march. The water-buckets of these men seemed an inferior plan to the leathern bag carried by the Indian Irregular Cavalry under the horse's belly, and attached to the saddle on each side of the girths. The bucket has not the same capacity as the bag, and, from the position in which it is carried, is much more easily got at on the march, being ready at the trooper's hand, and, consequently, if the man be thirsty, ever at his lips. Thirst, especially in hot climates, is always increased by sipping after a certain amount of liquid has been swallowed; consequently, the temptation to drink up his supply should be withdrawn from the trooper. Colonel Merewether, however, had been careful, and his invaluable man Francis produced a small supply of water for the thirsty cavalry men, who, like all the 3rd Bombay Cavalry, were remarkably fine soldierly fellows; handsomely yet neatly dressed, and well equipped.

It is somewhat surprising why nature gives her

twilight to those countries which do not require it, and withholds it from those which would regard it as an inestimable boon. This apparent mistake must, of course, be sought for in ourselves; for, doubtless, nature has regulated all things for the best if we could only understand her. Surely the countries which most require twilight are those in the tropics, wherein the sun shines with such power, that an interval between sunset and darkness would be most grateful to their inhabitants; and yet, it is those countries that at sunset are plunged at once into darkness. At, and near the equator, daylight and sunshine give place, in a quarter of an hour, to darkness or moonlight. What a boon morning and evening twilight, as in Europe, would have proved to our sun-dried party, and would daily be regarded by our countrymen in India. About the greatest drawback to the enjoyment of life in the East, arises from the fact mentioned; for air and exercise can only be enjoyed in the tropics in the early morning, or late in the day. Of course it must be understood that twilight is a greater necessity in the artic regions than it is at the equator; for it can be and is dispensed with at the latter, while life could not exist near the poles, where there are only two twilights in the year, without it. But in the temperate zone, where twilight is not particularly conducive to the comfort of the inhabitants, it is of long duration.

There is another point, too, which is closely allied to this subject, the cause of which, though as easily explained as the duration of twilight, is, in effect, apparently adverse to the comfort of man in the tropics. This is the deflection of the air currents between the poles and the equator. The north-east monsoon is due to the earth's revolution and preponderance of sea over land in the southern hemisphere, while the south-west monsoon is produced by the rarefaction of the air over the Asiatic deserts. The winds which ventilate the surface of the earth—and without which in India Europeans, at least, could not exist—are so deflected to the east and west, that the life-feeding breezes cannot be admitted into dwellings without the company of the too familiar sun. Certainly the natives of India do not much regard the direction of the wind, their antipathy to fresh air leading them generally to shut up every window and crevice. These facts may, perhaps, be taken as proof that the native of the northern regions has no business whatever in the tropical zone.

Colonel Merewether's factotum, Francis—who had served his master faithfully for four-and-twenty years, who was worth his weight, not in salt, but in dollars, and who was believed to be capable of converting a mule steak or a Shoho shield into a palateable stew—shortly provided a mess for the tired

Sâhebs; and the sand being as soft as a feather-bed, the whole party soon fell asleep on the ground. Four hours' rest, however, could only be allowed, and at 1 A.M. the slumberers awakened, got up, and shook the sand out of their pockets, hair, and boots. As no tents had been pitched, the party were soon under weigh by the welcome light of the moon. The Arab horse Theodorus and his companion, each got a soda-water bottle of water which had been carefully retained for their benefit; and, as the king stepped cheerily along, it suddenly flashed across his master's mind that he had given him in the dark by mistake the contents of another soda-water bottle which contained, not water, but sherry. Certain it is that afterwards, on examining the canteen, the sherry was not there, but the water was. Peace to his manes, for the unfortunate king, like his namesake, came eventually to an untimely end.

The site of our night bivouac at Addâdo was 88 feet above the sea, so we had risen about 280 feet in our previous day's march; and, although we approached the sea, the sandy plain, across which we were now proceeding, had a gradual rise in the same direction. This plain of Addâdo, pretty well covered with bushes of bamboo grass, was tolerably firm to the foot. After three hours of steady marching our route lay through a cleft in a range of hills,

and we again emerged on to a similar plain more plentifully provided with grass bushes. This plain, about eight miles in breadth, was bounded in the direction we were travelling by a considerable range of volcanic hills, and in length was apparently of interminable extent. For nearly seven hours we pursued our way over these plains, the morning sun, as we were now taking a north-easterly direction, toasting the opposite sides of our sun-burnt visages to those which had, up to our arrival at Ragoolé, had the benefit of its rays. At last, on reaching the base of the hills, our guides called out in Arabic, in cheerful tones, "moya, moya," meaning that water was at hand, and creating the absurd idea that it was close within reach. These wonderful pedestrians, the native chiefs, then led us up a small valley between the hills; and the cattle-track, first indifferent, then became bad, then abominable, and at last perfectly awful. Dismounting, we led our horses carefully over masses of rocks and boulders, and in this manner proceeded for an hour up this hideous gorge, expecting to find the precious liquid at each turn in the ravine, and as often being disappointed on rounding it. Thirty dreary miles had now been traversed in this wretched country without meeting with water, of which both men and animals were in the greatest need. At length the guides pulled up, and, with an air such as might

have been assumed had a noble river been discovered, pointed to four small holes, which, even in common courtesy, could not be called wells. For more than one person at a time to get at the water, which two of the holes appeared to contain, was impossible, as they were scarcely two feet in width, and the water was several feet below the surface; so, while sitting on the rocks in a spirit of complete resignation, the troopers endeavoured to fill their water-buckets. Great patience was needed, and in time all the animals obtained water; but it took some hours before they were satisfied. There was no shade in this dismal ravine, so the tents were pitched at this watering-place, called by the natives "Garsellogellé," which we converted into "Cursed-ugly," for it was both.

Colonel Merewether having previously directed that a steamer should be sent down from Zulla to Howâkil Bay to pick up our party, he proceeded, accompanied by Colonel Phayre, to climb the mountain overhanging Gârsellogellé, in order, if possible, to get a view of the bay, supposed to be about twenty miles distant. After a hot and hard climb they returned, having seen the sea indistinctly, and no signs of any steamer.

Though having had a sufficiently long march in the morning, the distance yet to be traversed to the sea reported to contain no water, was too great for

one march. Colonel Merewether therefore ordered, that the tents should be struck and the mules laden at four o'clock in the afternoon; and at 5 P.M. we retraced our steps down the rocky valley we had so painfully crept over in the morning. Not at all sorry to leave the "Cursed-ugly" ravine, we passed through the range over a low saddle, and descended into a sandy plain of the same character as those traversed in the morning; and marching till it was quite dark set fire to some of the bamboo grass to guide our now tired and lagging followers. To save both time and trouble the mule-loads, now fortunately became almost nominal, and the tents, were not unpacked, but laid beside the animals—one or two of which were now succumbing from fatigue and exhaustion — ready for the morning. With the necessary exception of the guard it was not very long before the whole party were fast asleep on the ground.

After four hours' sleep, as on the previous night, some of our party rose from the sand, and endeavoured to wake the muleteers and others. This was no easy matter; the reconnoitrers were much inclined to be loiterers, and altogether appeared to miss seeing the fun of getting up at one o'clock every morning, One individual even had the audacity to remark as he sat up rubbing his eyes that he was accustomed to sleep eight hours out of

the twenty-four, and not eight out of forty-eight; and in reply, obtained an answer similar to one a sergeant gave at Chatham twenty years before, in explanation to his officer of a complaint made by a soldier that he had had no loaf that morning: "It won't matter, sir, he shall have double allowance to-morrow."

Nevertheless, a fair start was made at 2 A. M., when the moon shone brightly on the plain. The young Chief of the Danâkil led as usual at a good pace, and with the greatest precision of direction over an enormous plain of very low level, barely above the sea, no landmarks being visible. Our route in some parts was very slippery, either from infiltration from the sea, or, as is more likely, from its proximity, from inundation at spring-tides. Just before dawn we halted as usual for a few minutes' nap, during which time Francis-the-Ready came up on his small camel with the lighted ship's lamp, he was accustomed to carry, on his port beam. The march was continued at a sharp pace, the young Chief stepping along with a gait which might be envied by many a *militaire*, and as if he did not know what heat, fatigue, and the want of water were; while the Indians, who so continually surprise us by their pedestrian powers in India, were quite done up. The most wearied were permitted to ride the unladen mules, but the remainder staggered along

only through sheer necessity. The low level of the plain prevented our getting nearer than a mile or more to the sea; and even at that distance, so low was the level of the plain, that a line of small salt-bushes at the water's edge obstructed the view of the bay. As we advanced we could not perceive any steamer or distant smoke; and the gradual rise of the sun induced a corresponding fall in the spirits of the party. The plain seemed never ending; and we had marched fourteen miles over it before reaching a coral rock, rising up a few feet at its edge near the sea, which had been visible since daylight. Shortly before arriving at the coral mound at a point of the promontory enclosing the bay, the welcome smoke from the funnel of a steamer appeared on the horizon; but we were not well pleased on making out the vessel to be the *Saadah*, as her small size rendered her unfit for our present purposes. When the troopers and followers closed up, Francis was missing; and though the plain was as level as a calm sea, without stone or obstruction, nothing could be seen of him and his camel. A guide was immediately sent in search of the involuntary deserter; and after the lapse of a couple of hours returned with the missing man and camel. The Arab driver, who rode with Francis, thinking he could improve upon the direction the guides were leading our party, endeavoured to make a

short cut; and of course, as is usual in such cases, speedily found himself in difficulties, having become entangled in sandy swamps.

From this promontory named "Râsa," on the south of Howâkil Bay, the mountain we had left on the opposite side the previous evening, appeared in the distance, of a deep blue-grey tint over the sea of sand. So level was this vast plain, an enormous natural reclamation from the sea, that it would have been difficult to believe that all those hours had been spent in crossing it, had not the colour of the "Cursed-ugly" hills given proof of its extent.

The men and horses had had no water since the previous afternoon; messengers were therefore sent to a small native fishing village hard by, the first we had seen since leaving the Egyptian encampment at Arâphillé. These shortly returned with the intelligence that the villagers had none to spare, as their nearest water supply was—turning time into distance—twelve miles away! The *Saadah* boat was now sent off to the tug to bring on shore all the water she had on board, about 300 gallons; and this was carefully doled out to both men and horses. The natives reported that water was to be obtained on the island of Bûka in the bay a few hours sail off. Accordingly a native boat, brought from Annesley Bay by the tug, was sent over to the island with all the water-skins to procure some for the evening.

Meanwhile, the Captain of the *Saadah* sent us some breakfast on shore, which we partook of in the shade afforded by the little coral cliff, which had been scooped out by the action of the waves. That breakfast we must hold in grateful remembrance; for it was indeed luxurious after our late fare, in spite of Francis' skilful manipulations. Now at our journey's end, we experienced considerable chagrin at the fruitlessness of our reconnoissance, which the arrival of home letters and newspapers by the *Saadah* only partially served to mollify. But we had still plenty of work before us; and the hope of better success with our next trip served, after a time, to dispel our vexation; for truly, after the first day's march from Arâphillé, we had never been very sanguine of success in these southern lowlands.

The results of the reconnoissance above described were as follows:—

1st. That a stream of running water, ample for the purposes of the British Expedition, existed at Ragoolé sixty-four miles, and at Lower Ragoolé fifty miles from the coast at its nearest point at Howâkil Bay.

2nd. That the Expedition, owing to the intense heat of the climate, and dearth of water, could not reach Ragoolé from Annesley Bay.

3rd. That even if troops could march on Ragoolé

from Arâphillé, there was no forage in the country, excepting camel forage in the Galata jungle, where there was no water.

4th. That between Lower Ragoolé and Râsa on the coast, a distance of fifty miles, there was only one spot where water was to be obtained; namely, at Garsellogellé; and it was unlikely the supply at this place could be very much increased.

5th. That there was no water at Râsa on the coast or within twelve miles of the sea.

6th. That to reach Ragoolé from the sea at any point was quite impracticable for European troops.

7th. That in a strategical point of view, the occupation of the highland pass over Ragoolé might be important if it were desirable to turn the northern passes and blockade the salt traffic; but that nothing short of extreme necessity could justify the adoption of any route by the River Ragoolé, for that in such a case the hazard, to even a small body of troops, would be very great.

The tug *Saadah* was the only vessel available when Colonel Merewether's message was received at Annesley Bay; but as she was far too small to convey even a portion of our animals, it became a matter of great importance to get back to Annesley Bay as soon as possible, in order to send the *Coromandel* for our horses and mules. So making all

necessary arrangements for a continuous supply of water from Bûka island; and leaving ample provisions and forage for the party, we embarked on board the *Saadah;* and the little tug was soon paddling briskly along, as she threaded the intricate navigation caused by the coral reefs and islands which abound in this part of the Red Sea.

As we reclined on the paddle-box of the *Saadah*, vainly endeavouring to evade the sun behind a strip of canvas awning, from the conversation going on in the engine-room, which was perfectly audible on deck, it was supposed that our engineer, a north-countryman, had got some poor patient with him, and that he was the most tender of nurses. The only paradox was, that the language used would have been more suitable to an invalid in the north seas in winter, instead of in the Red Sea in about the hottest month of the year. The "poor creature" was "so cold:" the "poor thing" must be kept "warm," especially in the vital parts. The native firemen were condemned to everlasting torments if they did not see that "she,"—oh! then it was a lady —got her "belly-full"—the horrid word!—"nice and hot." Then she required warming up, to "keep up her spirits;" when "low," she was, wonderful to say, "red in the face;" when white, then she was "jolly and tight!"

Curiosity shortly arriving at a high pitch, an

officer descended to inquire into the circumstances of this very extraordinary patient; when he was informed, in reply to his sympathetic inquiries, that it was only the engineer talking to his *engine!*

At 10 P.M. the same day, the 29th October, after eleven hours' steaming, the *Saadah* cast anchor off Zulla, in Annesley Bay. Colonel Merewether immediately despatched orders to Captain Hewett, commanding the *Coromandel*, to start at daylight for Râsa, to pick up the horses and mules, and we at once proceeded on shore. The Captain of the *Saadah*, in the excitement of anchoring in the dark, forgot his agreement with the officers at the camp, to fire a gun to notify our arrival at the anchorage; consequently, when we reached the beach, we found no horses to meet us. This mishap entailed upon us the final delight of trudging, in a pitch dark night, through the mile and a quarter of soft sand intervening between the shore and the camp. Thus we concluded at 11 P.M. a long day, commencing at 1 A.M. twenty-two hours before. As for the famed Zulla hyenas, if a pack of these brutes had invaded our tents and amused themselves with gnawing our saddles and sword-belts, and in the general disposal of our leather kit, and finally coiled themselves under our cots, not one of the party would have taken the slightest notice of the circumstance that night.

The horses and mules were safely brought away from Râsa, and arrived at Zulla on the second day; but some of the mules never recovered the effects of the severe march, and Doctor Lumsdaine's horse died of fatigue.

CHAPTER VI.

RECONNOISSANCE TO SENÂFÉ.

Advance Brigade arrives in Annesley Bay—Shelving Beach—Pier—Scarcity of Water—Reconnoitring Party Starts for Komaylé—Railway Projected—Wait-a-bit Jungle—Komaylé—Desertion of the Egyptian Muleteer—Character of the Egyptian and Persian Muleteers—Komaylé Pass—Sooroo Pass—Its Grand Appearance—Sappers at Work—Rassâmo—Munzinger's real Abyssinian—The Devil's Staircase—Burrukguddé—Dirty Pool—Ravine by Moonlight—Misled by a Guide—An Unpleasant Bivouac—Where are the Mules?—Guinea-Fowl Plain—Henderta—Spur-Fowl—Hog-Deer—Fidelity of the Shoho Guides—Mount Suera—Rahaguddé—A Stubborn Fact—Prince Kâsa—Political Discretion—Shoho Educational System—Ascent of Humbugone—Grand View—Rapid Descent—Return Journey—Maiyen—Sonakté—Vermin—Sooroo Pass—Komaylé—Results of the Reconnoissance.

Colonel John Field, B.I., commanded the advance brigade, which comprised the undermentioned troops :—

3rd Bombay Cavalry; commanded by Colonel Graves, B.C.

Mountain Mule Battery; commanded by Captain Marett, R.A.

10th Bombay Native Infantry; commanded by Colonel John Field, B.I.

3rd Company Bombay Sappers and Miners; commanded by Captain Leslie, B.S.C.

4th Company Bombay Sappers and Miners; commanded by Lieutenant Leacock, B.I.

Colonel Field with his brigade arrived at the anchorage at Zulla from Bombay on the 21st October, 1867. The experience gained by the pioneers in their voyage up the Red Sea proved of some service to the transports which followed. One steamer only of the advance brigade convoy had any mishap. This vessel approaching too near a coral reef had been deprived of the blade of her screw, but sustained no further damage.

The Reconnoitring Field Force was well satisfied at receiving the accession of strength obtained by the arrival of the advance brigade; particularly as the services of the three companies of Bombay Sappers and Miners, — the 1st Company commanded by Lieutenant Newport having followed the pioneers from Aden where it had been stationed, — were greatly needed for the construction of a pier and landing-place. The men of the Marine Battalion had worked most zealously at the commencement of these works; and as they were beginning to suffer from constantly wading in the sea, it was necessary they should be relieved. Lieutenant Dawes, Harbour Master, had by this time obtained a small fleet of native craft for the

purpose of bringing stone over from the peninsula of Buré on the opposite side of the bay; but, on the arrival of the advance brigade, these boats were obliged to be withdrawn for a time to aid in landing stores. The boats when employed in procuring stone from the opposite shore, none being procurable on the Zulla beach, could only make one trip a day, owing to the width of the bay, and the regular set of the land and sea breezes. Consequently, as it was evident, on taking a section of the shore at the most favourable spot on the southern spit of the River Hadâs, that a pier of at least 900 feet in length was required, the work promised to be one of considerable difficulty and magnitude, requiring all the resources of the Engineer Department. Captain W. W. Goodfellow, Field Engineer, was placed in immediate charge of this work, which was carried out by the Sappers under his superintendence.

Owing to the scarcity of water at Zulla, the 3rd Cavalry and Mountain Battery were sent to Hadôda shortly after their arrival, where there was a small stream of water; and it was arranged that the 10th N.I. should be posted at Komaylé, where the water-supply from wells could be increased. The Commissariat was now absorbed in the work of landing stores, arranging depôts on shore, and in the tedious operation of issuing rations. Captain

Griffiths, who had arrived in charge of the transport animals of the advance brigade, was already launched into a sea of troubles with the Egyptian mule-drivers sent with the mules from Egypt, which arrived without equipments, or even rope to tie them up with. The ropes with which the mules were secured on board ship had, as is customary with these animals, been gnawed and destroyed. In India they are always fastened with light chains to prevent such a contingency. Convoys of mules had now to be despatched with regularity to the advanced posts of Hadôda and Komaylé, at the base of the mountains.

Having completed all the arrangements in our power for the prosecution at Zulla of the work of our several departments, our Reconnoitring Party was ready by the 4th November to undertake further reconnoissances, which it was now necessary should be made at once for the determination of a route to the highlands. We knew we could get up to Halai by following the Hadâs for a certain distance, but we were also aware of the difficulties attending that route. On consideration, therefore, Colonel Merewether determined to follow up first the Nebhaguddé torrent from Komaylé, and to explore the Hadâs ravine afterwards. To facilitate the projected reconnoissance, Lieutenant Newport's company of Sappers was despatched in advance to

encamp themselves as high up the Sooroo defile as they could conveniently manage to get their transport mules. We should thus have their assistance in getting through the pass, which, it was feared, might be found impracticable without their aid.

At 3 P.M. on the 4th November, Colonel Merewether, accompanied by Colonel Phayre, Assistant-Surgeon W. T. Martin, M. Munzinger, and the writer, and attended by the Shoho chiefs of the country we were about to explore, left Zulla for Komaylé. The native track from the camp at Zulla, formerly called Mulkuttoo, distant nearly four miles from the native village of Zulla, led naturally through that village, which lay considerably out of the direct line to Komaylé. This track had been followed when first visiting Komaylé; and, subsequently, by the 10th Native Infantry, which had marched to that post across the lowlands, a few days previous to our departure from Zulla. Soon after landing in the country, it was seen that the lowlands were practicable for a tramway in any direction; accordingly, several miles of railway plank had been written for to Bombay. With a view, therefore, to the selection of a line for the tramway, should the Nebhaguddé ravine turn out favourably, we rode straight through the jungle towards Komaylé. As the bushes for the first few miles had no thorns, and could generally be

looked over, we had no difficulty in threading our way through them; but after proceeding for six miles, we approached a low, stony range of hills which runs parallel to the sea-coast, about half-way across the lowlands, and through which the river Hadâs, two miles to our north, has cut a channel for itself, as with a knife. Here, the character of both jungle and ground changed. The pleasant-looking green salt-bush gave place to the thorny "wait-a-bit" mimosa — the *acacia detinens;* and the alluvial soil, pleasant for our horses' feet, was left behind for rocks and stones. Turning the low hills by a branch of the Komaylé torrent, the country, which had a gradual rise from the sea up to this point, fell again towards the base of the Abyssinian mountains, but with a general transverse inclination southwards. Here we again entered upon a sandy plain, after traversing which for a mile the ground became exceedingly rough, and the thorny trees growing in close proximity to each other, we had much difficulty in getting along. Paying no attention to the antelope we saw occasionally in the jungle, we pressed on as well as we could; but we were at last forced to dismount, and pick our way carefully, the "wait-a-bit" continually detaining us. The moon was young in its first quarter, and, consequently, an evening moon; but it set too soon

to save us from being benighted more than a mile from our destination.

We found the 10th Native Infantry encamped in the wide gorge at the base of the mountains at Komaylé, where they had already commenced clearing the ground for a camp. Colonel Field and his officers entertained us hospitably at their mess, from which we retired early, in order to be ready to proceed on our way betimes the following morning. Komaylé, 400 feet above the sea, appeared, if anything, a trifle cooler than Zulla. The thermometer had stood at 104° in the shade this and the previous day on the coast, and led us to fear that the low country never rejoiced in a cool season. The officers of the 10th Native Infantry reported favourably of the wells in the gorge, and a gang of Shohos were engaged to excavate others, under the superintendence of a few Sappers.

The operation of loading the mules in the morning commenced more than an hour before daybreak. My baggage-mules not putting in an appearance with the rest, I sent after them to the mule lines of the 10th Regiment, where they had been picketed for the night, but they could not be found. As it was very dark, I supposed the muleteer had lost his way, and therefore waited anxiously for his arrival, the other mules of the party being ready. A Hindoo muleteer now reported that the Egyptian in charge

had absconded, taking the mules with him. This intelligence, at the last moment, was most vexatious: and the Indian muleteers stated that their Egyptian comrades had declared that they would not go into the mountain passes, fearing they would be starved in those wild regions.

These Egyptian muleteers were a principal cause of the difficulties of the Transport Train from the very commencement. The men were perfectly incorrigible, and when, subsequently, the Train received a Persian division of mules and muleteers, the annoyances and troubles which the officers of the Transport Train had to encounter from the doggedness, wilful disobedience, and extreme brutality of the men of these two nations, more especially of the Egyptians, were beyond conception. Of the vexation caused to individuals by the misconduct and desertion of the Egyptian muleteers my own case was one in point. At the latest moment, when the Indian mules with Hindoo muleteers were all ready to start, my Egyptian lot, which had been told off to me at Zulla, were on their way to Massowah, fifty miles off. The Hindoo muleteer is a most docile creature. He not only obeys orders, but attends to his mules, cleaning, watering, and feeding them properly. The Egyptians would do neither one thing nor the other. Always complaining that they had no rations, or that they

were insufficient in quantity, both complaints being untrue, they either deserted to Massowah, hoping to get back to Egypt, and thus secure the advances they had received, doing nothing in return; or perforce remained, and brutally allowed their animals to starve from want of food and water, when, if they only chose to take upon themselves the smallest exertion, they had both at their hand. Out of sight these men would never walk on the march, but added their own weight, 140 to 200 pounds each, to the mule's full load of 200 pounds. They resorted to every subterfuge to get rid of their loads, in order that they might have an animal to carry them without breaking down on the journey; and never went out of their way, or postponed their own meals, in order to water their valuable and exhausted charges. On the other hand, to mete out full justice, it must be allowed, that as the Arabic language is not a vernacular in India, the officers of the Transport Train, as a rule, were unable personally to enter into explanations with these people; and a sufficient number of interpreters not being procurable, some injustice was probably caused by a want of full and ample verbal communication between master and servant. Also, when the first advance was made on the highlands, the Transport Train had no warm clothing for the muleteers, who suffered severely from the cold at nights, cold more severe than they

were accustomed to in Egypt, for the ground was frequently covered with hoarfrost in the morning. The muleteers then entrenched themselves as well as they were able amongst the pack-saddles; but these only gave them a very partial protection. Nevertheless, the unruly conduct of the Egyptians was quite unjustifiable, and most dishonourable to them as a body. As it was found impossible to mould these men, said to be the scum of Egypt, into any shape, they were eventually sent back to their own country. The Persians did not behave so badly, and were more amenable to discipline; but they treated their animals with cruelty, and as they required an animal to ride themselves, one-third of their mules and ponies were abstracted from the transport service for this purpose.

As it was useless attempting to recover the lost mules, Colonel Phayre kindly obtained three for me from those belonging to his own department; and at 5 A.M. we started on our journey up the pass. It was still very dark, and we floundered over loose rocks and stones in the bed of the torrent, which was perfectly dry. When it became light enough to see where we were going, the channel of the stream up which we were proceeding appeared from 100 to 200 feet in width between the mountains on either side; and for eight miles the ascent was very gradual. We were now quite shut in by the

mountains, and our interest was centred on our front view at each turn in the torrent; but the shade cast over the bottom of the deep ravine by the enclosing mountains, was most acceptable, as their height enabled us to escape for a brief period from our enemy the sun. The mountains at their base were well clothed with the thorny acacia and other bushes, and altogether presented a different appearance from the bare and cindery hills met with on the journey to Ragoolé. This effect was principally to be ascribed to the greater amount of rain and moisture in these parts. On approaching the Sooroo defile, the rocks on either side became more abrupt in character, and in one place we passed a very clearly defined lava dyke rising vertically through the volcanic strata. At eight miles from Komaylé, the mountains closed in, and the bed of the torrent became very contracted and broken up. The granitic boulders of all sizes, which were tumbled about in confusion in every direction, much impeded our progress. Here, where the sides of the pass became vertical, a narrow stream, three feet wide by a few inches in depth, made its first appearance. Falling in little cascades between the boulders, forming here and there little pools, and rippling pleasantly along about the gravel and stones, this running stream added what alone was wanting to complete the interest of the scene. The

sides of the Sooroo Pass, which here had an average breadth of thirty feet, now rose up perpendicularly to a great height, and the defile cut through the rocks being tortuous, the scene changed at each turn, and presented a series of truly grand views. Mighty rocks towered overhead, the sun gleaming on their summits; here and there distant and lofty mountains peeped through the yawning chasm, serving to break up the sky-line and give distance to the picture. The sky itself, owing to contrast with the enclosing cliffs, appeared of a deeper blue than usual; and, excepting where a gleam of reflected light in the purling stream gave life to the saddened masses of granite through which it found its way, all below was in the gloom of deepest shade.

For more than two miles we picked our way carefully through the tangled mass of rocks, which here and there threatened a blockade of the pass, until we arrived at the Sappers' encampment about half way through it. Here Lieutenant Newport's men had already commenced operations at a point where a huge granite boulder contested the way. Satisfied with our march, and with the knowledge that there was worse beyond, we resolved to camp for the night in a recess formed in the rocks at this point, which was christened "Middle Sooroo." On taking the height, we found Middle Sooroo was 1,540 feet above the sea, so we had ascended about

A.Rolfe del.

M & N Hanhart imp.

MIDDLE SOOROO PASS.

London, Smith, Elder, & Co. 15 Waterloo Place. 1870.

1,150 feet since leaving Komaylé in the early morning. With even this increase of elevation, the temperature fell from 104° at Zulla the previous day to 88° at Middle Sooroo; and in proportion to this fall our spirits rose. Newport's Sappers equally felt the change; and they worked throughout the day with hearty will. With a lower temperature, working in the shade, the lofty sides of the pass screening them at almost all points for the greater part of the day, and with a plentiful supply of tolerably pure water, what a contrast to their late work in the burning sun at Zulla! Here these fine fellows were all animation, with the additional incentive that they were pioneers not only in name but in fact; at the coast they did their duty, but their work was devoid of the like stimulant.

As our nook was in shade most of the day, we did not think it necessary to pitch our tents, and so contented ourselves with a carpet on the rock. Newport and Jopp joined our party in the evening; and after drinking success to our venture to commence on the following morning, we soon fell asleep in the cool night air, which Doctor Martin's minimum thermometer registered at 72°.

Expecting to meet with obstructions unfavourable for cavalry, Colonel Merewether had substituted an infantry escort of a dozen men of the 10th N.I. in place of the troopers of the 3rd Cavalry; and a

few Sappers were added to aid in clearing away any impediments we might meet with. The high cliffs rendering the pass very dark in the morning, we were unable to get off before six o'clock. We left most of our horses behind; and in order to take the route survey and notes with greater ease, I abandoned my charger Theodorus for a very tractable mule, purchased for me by M. Munzinger, and which I named Rassâmo. This cognomen was at once distinctive of the Shoho tribe in whose country he was obtained, and of the individual in whose search his services were to be employed. By leaving the tents also behind us, their carriage was saved; and the change in the escort also saved the number of mules required for the carriage of the forage for the troopers' horses. Consequently, we marched from Middle Sooroo on the 6th November, with the most reduced number of mules compatible with the circumstances of the case.

Newport's Sappers were out early at work under Lieutenant Jopp, Assistant Field Engineer's superintendence; and their work enabled us to get over the first difficulty near our night's bivouac, and some other bad places beyond. The Arab horses, which were unaccustomed to so rough a country, not having as yet thoroughly learned, as they afterwards did, to walk with tolerable ease amongst masses of rock, slipped about a good deal as they were led over the

impediments. Not so, however, a small unshod bay with a wicked eye, a real Abyssinian horse belonging to M. Munzinger, a gift from a chief, which walked up and down stairs, over and between the granite boulders, as easily as the clever Abyssinian mules.

After scrambling on foot for a mile and a-half up the defile, we arrived at a spot where a huge boulder, the size of a villa, resting against two or three others scarcely smaller, and surrounded by other large blocks, completely stopped all further progress. This was the place which afterwards became so well known by the soubriquet of the "Devil's Staircase" given to it by Lieutenant Jopp, who, in a few days, subdued its difficulties for single animals by the aid of Newport's Sappers, but which was not finally overcome for the passage of artillery and carts till the end of January. The mules and even the "real Abyssinian"—which, from the large silver disc-like ornaments it had about its neck and forehead, looked as if it ostentatiously carried Munzinger's family plate for him—declined his Satanic Majesty's stairs; so the animals were immediately unloaded, and the Sappers commenced to fill in the first hole. This being effected, Munzinger's clever mule and Rassâmo, with a little persuasion, led the way; and with three zigzags at a scramble, one straight piece a few inches wide at a cautious walk, and a slide down the upper face of a large boulder, they got over.

The Indian mules not regarding the obstacle in the same light, with one or two exceptions, steadily refused to follow the lead of their Abyssinian comrades. Two or three muleteers then got a rope, and, perched upon the rocks, passed it behind the foremost mule, another man pulling vigorously at the animal till a start was effected, when the pressure in the rear was only retained. In this manner, with more or less success, the rest of the mules were got over, not, however, without one or two insisting upon an acrobatic performance in the transit, and returning with a summersault to the spot from whence they started. Fortunately, like Mr. Briggs in the steeplechase, they came on their heads, and so were not much hurt. The baggage was carried over by the men, one of whom when he reached the slide down the face of the boulder, stopped the way, and when hailed to move on, replied in piteous tones, "*Main kya karoon? — agé buraf piché ketcha.*" * This was an anxious moment for two parties, for the trembling Hindoo carried on his head my canteen basket. As he could not go back and dared not go forward, he did neither, but sat down on the edge of the slide. At this moment a fine Roman nose planted in the small of the Hindoo's back dislodged him, and deposited him, basket and all, at the foot of the inclined plane.

* "What can I do?—there's ice in front and a mule behind.'

A.Ridle del.

M&N Hanhart imp

DEVIL'S STAIRCASE SOOROO PASS

London, Smith, Elder & Co 15, Waterloo Place. 1870

Altogether it took us an hour and a half to get over two hundred yards, after which the defile gradually improved in character, until at last it opened out into a small valley. The perpendicular cliffs gave place to steep slopes, and the boulders of gneiss to others of more moderate dimensions. On consideration it will be apparent that it was a misnomer to call the great impediment in the Sooroo Pass the "Devil's Staircase," for, from all accounts, it is the road to Paradise only which is so proverbially difficult.

As we emerged from this formidable defile, which altogether was about four miles in length, the cheerful little stream disappeared. The comparatively open valley at the head of the defile, Colonel Phayre considered, would be a good spot for a camp, the mountains on either side, though very steep, not being inaccessible, and water at hand. The sides of the torrent-bed, which here had a width of a hundred feet, were lined with tamarisk bushes and the inevitable mimosa, which gives a very poor shade. When we had covered six miles above the Sooroo Pass, the morning being well advanced by our delay there, we halted for breakfast and to make inquiries at a place called Burrukguddé, where the natives said we might perchance find a little water. Here the trees, which grew to larger size and in greater variety, afforded

very welcome shade; and we took up a position in a tangled mass of trees in the centre of the stream-bed which had now opened out to a width of two hundred yards. At this place the grandeur of the scenery was very imposing, the widened ravine giving greater scope to the view, which embraced lofty mountain ranges now seen for the first time. Some flocks and herds, tended by Shohos, wandered over the sides of the steep ravine, and the small cattle appeared as active as the goats. These flocks were often so high up the mountain side as not to be noticed, until, by their passing in our vicinity they signified their presence by displacing the loose stones, and sending them rattling down into our ravine below them.

Colonel Phayre and Dr. Martin, on our arrival at Burrukguddé, started off to examine the water-pool, which they found high up a narrow side ravine, and very difficult of approach. The water itself and the surrounding rocks were quite black, and in a most filthy state from the frequent visits of the thirsty cattle. It might be supposed that the natives, for their own benefit, would have taken care to keep their water-pool clean; but eastern races, in a higher state of civilization than these Shoho savages, are equally careless in this respect. Higher up, another small pool fed the one below, but it was almost inaccessible, and the spring feeding

it scarcely perceptible. During the day our Sappers cleaned out the lower pool, but there was no water to wash the sides, and the poor spring, merely producing drops on the side of the rock, was quite unequal to the task of refilling the hollow. Under these circumstances, when M. Munzinger, after passing the Shoho chiefs through the usual process of cross-examination, reported to Colonel Merewether that, as far as he could discover, the next watering-place was not less than seventeen miles distant, and consequently twenty-three miles from our last watering-place at the head of the Sooroo Pass, the gravity of the situation was apparent to all. As we had only as many mules with us as we thought we could possibly manage with, our water supply in skins was not very abundant, and there was none for the mules. Colonel Merewether therefore resolved, as the distance to the next water was shrouded in considerable ambiguity consequent on discrepancies in the statements of the natives, to push on a few miles that evening by moonlight, so as to reduce as much as possible the next day's march in the sun and its consequent thirst. In the afternoon we all visited the pool, which was situated high up in a very precipitous ravine. The Sappers had cleaned it out as well as they were able without a fresh supply of water; and it was evident it would take a long time to refill. It

appeared quite marvellous how the cattle ever got up to the lower pool. There was an upper one of the same description, but inaccessible, except to monkey-climbing.

Soon after seven o'clock we started in the moonlight; and as we marched on this occasion purposely quicker than the mules, in order to fix upon a position for a night bivouac before they came up, the Sepoys and a guide accompanied them in our rear. As we rode up the centre of this deep ravine, one side in the depth of shade, the other illuminated with the pale light of the moon, the whole aspect of the scene, with its surrounding masses of lofty mountains, was grand in the extreme, and the stillness of the night added to its impressiveness. We pressed on for three hours up the gravelly bed of the mountain torrent, which now and again separated into several channels, with jungle interspersed between them; and as the mountains opened out and numerous tributaries from the adjoining ranges joined the main ravine, it was evident that without guides we should have wandered from our proper direction. The moon was fast setting behind the mountains, giving warning of the total darkness that would ensue; we therefore halted with the intention of forming a bivouac for the night. As it was getting very cold, we collected some dry branches of trees, and lighting a fire, sat down on the rocks in the centre of the

valley, and patiently awaited the closing up of the guard with the baggage mules. The change of temperature in the last two days, from sultry Zulla to our bivouac in the mountains, was indeed most sudden; and the baking we had undergone on the sea-coast, and on the plains of Ragoolé, made us very susceptible of cold. We were now unable to keep warm, even when sitting over our jungle-wood fire. Our linen uniforms, so well adapted for the heat, now allowed the cold night air to penetrate and extract the warmth of our bodies; so that, while toasting one side at the fire, the reverse side became as cold as ever. After waiting thus for an hour, the moon disappeared behind the mountains, causing complete darkness to overshadow the deep valley. But what had become of the guard and mules? We still expected them, and speculated on the cause of their non-arrival. The night air now became so bitterly cold, that the whole party sitting round the fire gradually lapsed into silence. This was suddenly broken by Colonel Phayre, who energetically exclaimed, as he rubbed his half-numbed hands, that he proposed we should have some hot coffee directly the mules arrived. Unfortunately the mules came not, and ideas of hot coffee vanished; so giving them up for the night, we endeavoured to go to sleep in the torrent bed; but owing to the coldness of the night, and roughness of the couch, with very poor

success. Unable to rest or keep warm, Colonel Phayre and M. Munzinger started off in the darkness at 2 A.M., and wandering down the ravine for a couple of miles, came upon some natives who had passed us the previous evening on their way to the coast with a few loads of hides. These men on being questioned, stated that they had come from Tekoonda in Abyssinia, and were now on the road from that place; that the ravine they were in led into the Komaylé ravine above Sooroo, and that the valley leading up towards Senâfé on the highlands would be met with a little distance down this Tekoonda ravine. It was at once apparent from this information, that we had left our proper route the previous evening, and the guide being taxed with misleading us, confessed he had mistaken the way in the darkness. This, under the circumstances, we believed to be true, and not that we had intentionally been taken up the wrong course. When this news was brought back we prepared to make a start as as soon as it was light enough for our horses to see where they were going.

Starting off with impatience before daylight, we wondered what could have become of the mules and guard, for the latter had orders to follow us up until they arrived at our chosen halting place. We retraced our steps about three miles, when we turned into the ravine we should never have left but for the

darkness of the night; and very shortly after turning into our old valley, we found the tracks of our party in the sand. The ravine now again opened out into a plain of considerable size, half a mile in width at least. This we christened "Guinea-Fowl Plain," owing to the number of those birds seen in it as we passed by, some of which Colonel Phayre invited to dine with us in the evening. Continuing our march without interruption for five hours, we halted for a few minutes at the junction of another small ravine having a small watering place, not much better than that at Burrukguddé, some way up. This place was called Henderta, but as we could not water our horses there, we hastened to follow up our now advanced guard.

At Henderta the ravine closed in to a narrower width than we had yet seen it since leaving Sooroo, and the torrent bed became most tortuous, winding in and out every hundred yards. Here we first saw the large partridge, popularly called spur-fowl on account of the two large spurs on each leg, and obtained a specimen. Shortly afterwards Colonel Merewether made a good shot at a hog-deer on the rocks, so if baulked of hot coffee we had guinea-fowl, partridge, and venison in prospect, and that was something in this country. The bed of the ravine, which had had such a wonderfully gradual and easy ascent the whole way from the Sooroo Pass, now

became steeper, with uneven surface, necessitating some trouble in picking out the way to avoid the large stones and overhanging branches of trees. At last, tired out from want of rest and food, we passed through a naturally formed gateway, the vertical rocks on either side romantically shadowed by two or three magnificent trees. Just beyond this gateway, the most grateful view in these countries, a trickling stream, came in sight, and at 1 P.M., after a ride of eight hours, on turning the next angle, we found our people assembled on the banks of the stream enjoying the fresh water after their long march of twenty-three miles during the night. It appeared that as the guard had received orders to march until they came up to us, they had blundered along the whole night in the dark, thinking their officers were ever before them. It was fortunate that guides had been attached to the party, and that these men had acted with fidelity. But the chiefs and leading men of these Shoho tribes never did otherwise. Tired as we were, the scene at our new camp was inexpressibly refreshing. The cheerful stream limpid and cold, the margin and sides of the contracted ravine lined with pleasant trees affording ample shade, and the atmosphere charmingly cool and bracing, completed our thorough translation from the arid shores of the Red Sea to a climate due to a far more northern latitude. The light-

coloured sandstone cliffs marking the margin of the highlands had been visible to our right as we passed from Guinea-Fowl Plain; and as we approached our pleasant encampment we had seen peeps of mountains of vast elevation, and the bluff scarp of Mount Suera, nearly 10,000 feet in height, towering up majestically on our left. The coffee at last made its appearance, just fourteen hours after it was desired, but the miseries of the past night were speedily forgotten in the delights of Rahaguddé.

Resting for the day in delightful contemplation of this pleasant spot, 5,700 feet above the sea, we were glad towards sunset to light a fire close to our rugs to keep ourselves warm. The temperature, which had only risen to 75° in the shade during the day, fell to 51° at night, which is quite cool enough for sleeping in the open air. As we discussed the last march, which we made out to be twenty-three instead of seventeen miles from Burrukguddé, and twenty-nine from Upper Sooroo where the last water had been left behind, our pleasure at having got on so far well was not wholly unalloyed. A march of such a distance for troops, taking into consideration that the ground, where not covered with loose stones, consisted of soft sand and gravel, and also that the rise, though gradual, was no less than 3,630 feet, could not but be regarded as presenting a serious obstacle to the adoption of the route. A

twenty-nine mile march was a stubborn fact to be dealt with even in that climate, where the sun's rays were still all-powerful, though much tempered in the last two thousand feet of elevation. Nevertheless, on the whole, there was much satisfaction that matters were not worse; that the ascent had not been broken up by steep slopes and precipitous falls, such as inevitably would have been the case in mountains of the same formation as those of the western ghauts of India; and finally, the highlands being within view, and only a few miles distant, there was great hope that the twenty-nine mile march might turn out the greatest, and perhaps the only, difficulty to be contended against.

We were rather surprised not to have fallen in with any Abyssinians or spies of Dajjâj Kâsa, ruler of Tigré, the northern province of Abyssinia, to the confines of whose territory we were fast approaching. Having come up from the coast as far into the mountains as Rahaguddé in three days, it was not supposed that Prince Kâsa, who was reported to be residing at his capital at Adowa, could be aware of our proximity to the Abyssinian border; but as the Abyssinian chief must have been for a long time aware of the proceedings of the British party on the sea-board, it was natural to conclude he had his scouts on the look out for any advance on our part on his north-east frontier. No

doubt our proceedings were reported at Adowa, but no spies came near our camp that we were aware of. Colonel Merewether did not wish to compromise any local village chiefs who might meet us in a friendly spirit and afterwards suffer in consequence, should the Prince's policy lead him to dispute the advancé of the British force. He therefore determined not to proceed actually to Senâfé, which we heard was near the edge of the highlands directly to our front, but to be contented with a view of the termination of the ravine, combined with all the information which could be obtained regarding the nature of the remaining portion of the route. To carry out this intention it was determined to ascend a lofty mountain overhanging Rahaguddé the first thing in the morning.

It was with difficulty we kept ourselves warm during the night, and at daybreak we were not sorry to start on our expedition on foot. The Rahaguddé stream at this time only ran for about 150 yards above our camp; and the ravine became more contracted, filled up with boulders, and required more climbing than anything we had seen since leaving Sooroo. There was no real impediment which could not readily be overcome by the Sapper, and it was to be anticipated as the ravine died out that a very easy ascent could not be expected. Leaving our old torrent-bed we struck off to ascend the

mountain. Our active Shoho guides were now in their element, and climbed the steep ascent like monkeys, but it was no such easy work for us untrained for the performance. Hill climbing forms the principal subject of education of the Shoho, and in it he becomes a proficient by being sent out on the mountains at an early age to tend his father's flocks. Fortunately for us, the slaty rocks having a cleavage almost perpendicular to the surface of the mountain on the side of our ascent, the foot obtained firm hold on natural steps, and prevented slipping, which in some steep portions might have resulted in a rapid descent to Rahaguddé. Colonel Phayre, who is an excellent pedestrian, and must have received some of his education in a hilly country, emulated the Shohos, and we all arrived at the summit of the mountain as if likely to be late for an express train about to start for Abyssinia.

The natives had no name for our mountain, which had an elevation of 7,200 feet above the sea; but a neighbouring peak being called in Shoho Humbugtoo, ours was christened Humbugone. The view obtained from the summit of this mountain was indeed grand. From 8° north-west, to 77° north-east, nearly a right angle, we looked down upon the several ranges of mountains which bordered our route from Komaylé; and the perpendicular scarp, which appeared to mark the margin of the highland

plateau, filled up the sky-line of the remainder of the circle of our view. Mount Suera, notwithstanding our great elevation towered over us at not more than two miles distance on our left; and the highlands of Tekoonda, ten or twelve miles away, were pointed out as lying behind the scarp on our right. The position of Senâfé was marked by some immense isolated masses of rock, which afterwards became so familiar to the British force. The plain of Senâfé did not appear to be more than a few hundred feet above Humbugone, and the continuation of our ravine was easily followed. The Shohos also directed our attention to a spot about half way between Rahaguddé and the highlands, where they said there was water. The whole distance from our camp at Rahaguddé to Senâfé appeared to be about eight or nine miles. The Shohos averred there was no difficulty to be met with between our camp and Senâfé, only that the track was somewhat steeper than that we had traversed; and after taking a series of observations, we commenced our descent of the mountain with a feeling of perfect satisfaction that our present business in this direction had been successfully accomplished. Colonel Phayre led the way down after the guides in his usual style, the consequence of which was that we reached our camp in an hour, the ascent having taken an hour and forty minutes. This gave a rate of fifteen feet of perpendicular rise

per minute for the ascent, and twenty-five feet a minute for the descent, which must be allowed to be pretty good climbing.

Not to lose time, at 5.30 the same evening, the 8th November, we commenced to retrace our steps towards Sooroo, marching steadily for six hours by moonlight before making a halt. The first five miles being very rough, and well covered with jungle, gave us some trouble in avoiding, in the dim light, the overhanging branches of the trees; but after that we made good progress, and before 12 P.M. rolled ourselves up in our blankets round a jungle-wood fire at a spot in the torrent-bed named Maiyen. The Shohos stated that in former days water had been obtained at this place. A well had existed there, but as it had been filled up by the torrent, and was deep, it had not been re-opened of late years. These Shohos are most short-sighted fellows, for their exactions, or in other words, robberies, had completely diverted any traffic which in earlier days found its way into this ravine. The modern kâfilah routes from Massowah by Halai and Kiaguor were much more difficult; but Consul Plowden even does not appear to have heard of the Komaylé ravine, or of any route *viâ* Senâfé, excepting that leading on to Tekoonda traversed by Dr. Krapf in 1842.

After four hours' sleep at our Maiyen bivouac,

we continued our journey down the valley. Passing Guinea-Fowl Plain, we reached, in an hour, the mouth of the Mudhullo ravine, where we had been misled on our way up from Burrukguddé. A second hour's march brought us to a spot called Sonâkté, where the guides said a little water might be found in a pool in a side ravine. As, on inspection, some water was discovered at this place, and the next camp at Middle Sooroo was still distant four hours' march, a halt was made for the day, and advantage taken of the shade afforded by a bank of bushes. Colonel Merewether now made arrangements with the Shohos to have a well excavated at Maiyen, in the hopes, that should water be again found there, the great objection to the route—the twenty-nine miles without water — would at once disappear. Our small party exhausted the water supply at Sonâkté, so it was quite evident that the small trickling springs at Burrukguddé and Sonâkté could be of no use for the purposes of the expedition, even if it would not be unjust and impolitic to deprive the natives of the little water there was for them and their flocks in these desolate regions.

From the summit of Humbugone a few villages were seen on some of the broader spurs below, but no collections of huts were observed on our way up to Rahaguddé, except at a point about a mile

above Maiyen, near the Undul torrent. Here there was a wretched-looking encampment of natives, with a few flocks. Doubtless there were villages overlooking the ravines in the direction in which our party travelled, but they were perched up so high as to be quite out of view from below. The country, therefore, we had explored may be said to have had a thoroughly deserted appearance. A few natives with flocks, and a few conveying hides on bullocks down to the coasts, comprised all the population seen in these desert regions.

We obtained very indifferent shelter from the hot midday sun in the thin bushes of Sonâkté; but what proved almost worse than the sun was the number of large cattle-tics, which invaded our carpet like cavalry skirmishers. These unwelcome visitors, about the size of threepenny pieces, swarmed in all the shady places in these passes, and were generally supported by regiments of black woodlice. During the day we were enabled to hold our own under the trees and bushes, being able to see our enemies; but at night, as we slept on the ground, we were forced to retreat ignominiously to the centre of the dry torrent-bed, preferring a stony mattress all to ourselves, to a softer bank with such vermin for bedfellows.

At 5 A.M. the following morning we started for the Sooroo Pass, where we found Jopp and Newport

hard at work with the Sappers, converting Abyssinian staircases into practicable bridle-paths. We descended in a few minutes what had taken us an hour-and-a-half on our way up, but the path was only available for horses and mules. It was clear that, in the event of this route proving to be the best to the highlands, in which case it would be necessary to make a road through the Sooroo Pass practicable for gun-carriages and carts, very heavy work, extending over some weeks, would be required.

We remained at our old camping-place at Middle Sooroo for the night, and started early the next morning, the 11th November, for Colonel Field's camp at Komaylé, which we reached at breakfast time. The 10th Native Infantry had been hard at work during our absence, and had made a large clearance in the jungle at the gorge. The rough ground being levelled gave the camp a neat appearance, and Colonel Field's men had commenced to clear a wide track, both up towards Sooroo, and also in the direction of Hadôda, where the 3rd Bombay Cavalry and Captain Marett's battery were posted.

The results obtained by this reconnoissance were briefly as follows :—

1st. A route to the highlands practicable for the passage of the Expeditionary Force could be

obtained with the expenditure of some labour by the Komaylé Pass.

2nd. The worst feature in the route, and the most difficult to overcome, was the absence of water in the length of twenty-nine miles intervening between Upper Sooroo and Rahaguddé.

3rd. The Sooroo Pass would take three companies of Sappers several weeks to make it practicable for wheels.

4th. The defile of Rahaguddé would also take some little time before the Sappers could construct a road through it for gun-carriages.

5th. Some additional Sappers' work would be required at the termination of the route near the highlands.

6th. The whole route would require clearing of rocks and stones, if wheeled traffic was contemplated.

7th. The pass was not affected by the lowland rains, about to commence, sufficiently to bring down its waters, but would remain available at all points until the next highland rainy season, commencing in May.

8th. No forage or supplies could be obtained between Zulla on the coast and Senâfé on the highlands, excepting meat; but the natives were very loth to part with their cattle.

9th. If the Abyssinians chose to defend the pass

and oppose our troops, such opposition would be very serious, and would require much caution and skill on the part of the British force.

10th. Although the Sooroo and Rahaguddé defiles were steeper in gradient than the rest of the route, and the last five miles into Rahaguddé were also somewhat steeper, yet there were no cataracts or falls to be met with the whole way; and a gradient of one foot rise in forty-one feet of length would express pretty nearly the rise of the pass.

11th. The whole distance from Zulla to Senâfé was about sixty-three miles, and would be divided into five marches, viz.: Komaylé, Upper Sooroo, Maiyen,—where water was being sought for, which, if unsuccessful, would necessitate a night bivouac at the same place,—Rahaguddé and Senâfé.

Considering that the modern engineer makes his mountain roads, when of considerable length, at a gradient of one rise to thirty-five in length; that only one in twenty is allowed on the Government mountain roads in the Bombay Presidency; and that far steeper gradients prevail on the Alpine passes which do not in some cases exceed the height of the Abyssinian table-land, the easy gradient of the pass by Komaylé must be considered as a very extraordinary natural phenomenon, due in a great measure to the nature of the rocks on which the

high lands are supported. The comparative evenness of the gradient must be placed to this account, combined with the fact of the violence of the Abyssinian storms producing torrents of irresistible power, which, in process of time, sweep and level everything before them, filling up all inequalities.

CHAPTER VII.

RECONNOISSANCE TO TEKOONDA.

Reconnoitring Party starts for Hadôda—Mimosa Jungle—Shoho Villages—Shoho Insurance Companies—Marriage Insurances—Defile Cut by the River Hadâs—Geological Problem—Attempted Solution—The Mulpurba Chasm—Colorado Chasm—Hamhammo—The Illeleià Chasm—Egyptians again—An Example—Rough March—Deema—Tubboo—Tortuous Ravine—Shoho Names—Shoho Câdi—Mahiyo—Early Rising—Passes of Shumfaito and Taranta—Bruce's Route—His Troubles—Tahazit Defile—Baboons—Maderto—The Amba Deria—Kâsa's Spies—Chief of Tekoonda—Steep Ghaut—Table-land at Last—Denda Plain—Koheito Range—King's Camp—Koheito Peak—Heavy Climbing—Peak of Assuat—Grand View from Tsaro—Ruins—Subjection of Tigré to Kâsa—False Intelligence of Kâsa's Intentions—Halai District Friendly—Halt at Allelie—Virulence of the "African Glanders"—Officers of the Reconnoitring Party lose their Horses—Lowlands Fatal to Horses and Mules—Return to Zulla—Komaylé Pass Selected—Reasons for the Selection—Pass why previously unknown to Travellers—Progress at Zulla—Captain Edye, R.N.—Transport Train—Reason of its Failure—Transport in India—Polyglot Muleteers—Exertions of the Train Officers—The Pasha's Banquet.

LEAVING the escort of the 10th Native Infantry to return to duty with the head-quarters of the regiment at Komaylé, the Reconnoitring Party, comprising the same members as in the last recon-

noissancé, took their departure from that post on the morning of the 12th November, for the cavalry camp at Hadôda, situated on the River Hadâs, where it debouches on to the lowlands. The Komaylé gorge was very wide, and although Colonel Field had got his regiment inside the mouth of the ravine where there was room for another regiment, the heat was not greater there than outside. Some of the men of the 10th N.I. were said to be suffering from swollen glands in the neck, and the same complaint was common at Zulla, probably caused by the land wind at night.

The route from Komaylé to Hadôda led us round the base of the mountains to the north for about a mile, when it crossed over a saddle in a range of hills, and we found ourselves descending into a valley enclosed between the mountains and this detached range. The mimosa jungle was thicker and more inconvenient than usual; but although a nuisance to the traveller, its valuable properties should not be lost sight of. The young shoots and seed-pods of the tree form the jungle food of the camel and goat; and besides its value in this respect it presents other claims to usefulness. The wood of the tree is very hard, and is much used in India where the quality of toughness is desired. The ashes of the burnt wood are also used by plasterers for producing neutral tints and stone

colours, although burnt cocoanut shells, when obtainable, are preferred for this purpose. A march of eight miles brought us to Hadôda, where we received the hospitality of the 3rd Bombay Cavalry, commanded by Colonel Graves.

The names given by the Shohos to the different localities in their mountains do not generally refer to villages at those points, but are usually applicable to the watering-places, whether streams, pools, or wells. The reason for this is, that the population being pastoral and migratory, their head-quarters for the time are determined by the amount of forage obtainable for their cattle, and the season of the year. They remain on the higher parts of the mountains, and on the edge of the table-land during the hot and rainy seasons, and travel down to the plains in the cool months, when the lowland showers cause grass to spring up on the plains. They have no camels in the mountains, as those animals are not adapted for hill climbing; if they had, the acacia jungles would not be so obstructive to travellers. We frequently came upon collections of skeleton huts, consisting of stakes stuck in the ground in circles of about twelve feet diameter, the upper ends being bent inwardly to a point, forming the apices of the roofs. Probably the grass, with which these huts are covered when inhabited, is removed and transported on the cattle when the people change

their quarters. There are numerous permanent villages in the mountains, and from the peak overhanging Rahaguddé, as already mentioned, several collections of huts were seen located on small plateaux on the spurs below; but we were then, as it were, behind, or rather above the scenes, and the villages are not often situated very near the water supply, and are usually so placed as not readily to come within the view of persons passing through the country. The banks of the streams, and the close vicinity of the watering pools is avoided for the same reason that the Danâkil do not abide on the banks of the River Ragoolé. They are afraid of being molested by passing bands of Abyssinians, or of their fellow-countrymen; and in a country where water is so scarce, watering-places, and not the direct routes, determine the halts of marauders and travellers.

These nomad tribes have a very curious system of insurance, answering the same purposes, and, judging from late events with probable equal safety, as the insurance companies of more civilized nations. Should an individual lose any of his cattle in a cattle-lifting expedition conducted by a common enemy, the whole community contributes to replace them, so that the robbed do not alone suffer from the depredations of their unruly or hostile neighbours, but the loss falls equally upon all. These

contributions, however, are only regarded as loans, and the owner of the newly formed herd returns a cow to any of the donors who may be robbed in their turn. This insurance system is not confined to those possessing flocks and herds, for Mr. Rassam states he found the same kind of scheme to prevail in the island of Massowah in respect of marriages, where the single friends of those about to marry are called upon to subscribe in coin for the benefit of "happy couples." As marriage is a trade that never fails, the merchants of the trading port very soon invited the English Envoy to join the unlucky band of bachelors in assisting the start in wedded life of a young couple. To this request, in spite of the doubts he may have entertained as to the advisability of the investment at the moment of his departure for the court of the jailer King, Mr. Rassam was polite enough to respond. It is to be hoped, but doubted, that now this gentleman has become a Benedict he may have reaped the benefit of his marriage insurance!

The camp at Hadôda was situated on the bank of the dry bed of the River Hadâs, in a valley intervening between the base of the mountains and the detached range of hills mentioned as having been crossed in the previous day's march from Komaylé. Just below the camp there was a defile cut through this advanced range by the Hadâs torrent which

impinged upon it at right angles. This defile was somewhat similar to that at Sooroo, only wider, the cliffs on either side being less abrupt and not so lofty as those at the latter place. The cutting, though not so knife-like as the Sooroo, and much shorter, was sufficiently precipitous on the sides to render them inaccessible at most points. The small stream came to the surface a hundred yards above the defile and disappeared at the other end.

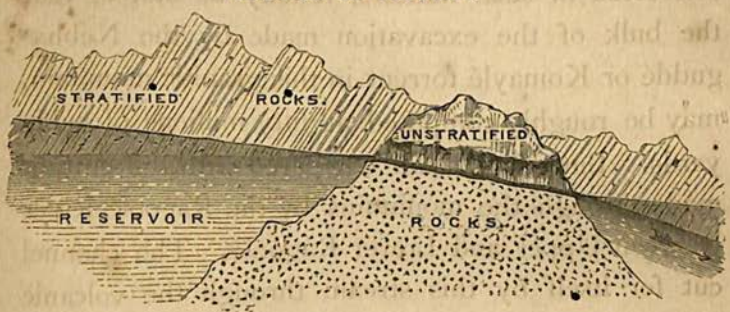
How is the appearance of perennial streams in these narrow defiles, and nowhere else during the dry season, to be accounted for? An isolated case might have been passed without attracting any very special notice; but the phenomenon occurred at no less than seven different places which came within our own observation during our reconnoissances. We found streams at the Sooroo, Rahaguddé, Hadôda, and Ragoolé defiles; and subsequently, at the Illeleia chasm, and at two or three other narrow places in the valley of the River Hadâs. I would endeavour to solve the geological problem, as follows:—

The mountain torrent-beds were all dry where they passed over the mica-schist and clay-slate rocks. These stratified rocks, being tilted up at a high angle to the plane of the surface of the torrent-beds, the water absorbed by them, and percolating their fissures, runs off below the surface, and collects

at great depths. The rocks in the defiles were not stratified, but were mostly granitic or of volcanic origin. These defiles have been cut by the force of the torrents through mountains of these formations; but the low-lying rocks act as dams to the water collected below the surface of the stratified rocks. The water which percolates the stratified rocks becomes pent up by the subterranean dams. It then collects in reservoirs and interstices, and is upheld at certain depths, either by the closeness of the strata below ground where subject to great pressure, or by a water-bearing stratum. In this manner sufficient water is collected to rise to the surface at one point, which naturally, owing to the force of gravity, occurs at the upper edge of the dams. The water, therefore, which is collected in the subterranean reservoirs, flows over the impervious dams, and disappears on reaching the stratified or pervious rocks on the other side. Rain falling in the ravines produced a sensible effect in the body and length of the streams, which was natural; but the increased length was principally at the lower ends of the streams, not at the heads. Of course this theory admits of an increase in length at the heads, but the main increase would be at the lower ends. The accompanying diagram will illustrate the theory here set forth. The conditions attending the flow of water through the

Ragoolé defile are somewhat different to those which are found to be peculiar to the other passes; but the stream does not disappear until it has traversed the whole length of the defile, and has reached the plains on the lower side.

SECTION OF TORRENT.



There is another subject in connection with these Abyssinian defiles, which is deserving of the passing notice of the geologist and physical geographer, and that is, the power of running water as exemplified in the defiles themselves. It does indeed appear marvellous how even the vast power of running water could have worn deep channels several miles in length through mountains of gneiss and basalt. The gneiss rocks in the Sooroo Pass at first defied the skill of the miner, and turned the edges of the implements he was accustomed to work with; and only, after some practice and much patience, were the most experienced men able to

drive highly tempered steel drills into the boulders which blocked up the way. Notwithstanding the tough nature of the rocks composing the mountain, the torrent has excavated a channel through it four miles in length, and probably not less than a thousand feet in depth. For the benefit of those interested in such matters, it may be stated, that the bulk of the excavation made by the Nebha-guddé or Komaylé torrent in this granitic mountain, may be roughly computed at fifty millions of cubic yards. But this is small compared with the cutting made through the mountains by the Ragoolé River between Upper and Lower Ragoolé. The channel cut for itself by this stream through the volcanic mountains, only a few degrees less adamantine than the gneiss, is eleven miles in length. Four hundred millions of cubic yards of volcanic rocks washed into the plains is perhaps a rather low computation of the work which has been executed by the stream in question. A similar operation, according to native report, has been performed through the same mountains within eight miles of Ragoolé, by the torrent which led from our camp at Ramote.

There is a cutting similar in character to these Abyssinian defiles to be met with in the southern Mahratta country in India. It occurs on the Mul-purba River, south of Belgaum, and is regarded with curiosity by the few Europeans who occasion-

ally find their way into the remote part of the country in which it is situated. The river before entering the cutting in the hills simply crosses a large plain. This fact suggests a question equally applicable to the Abyssinian parallel, though not in so striking a manner, as the Abyssinian rivers are torrents throughout. How is it the river has been able to wear a passage through mountains of hard rock to the same level as its bed in the soft plain above? Why is not the plain scooped out and destroyed long before the stream can produce any effect on the mountain? The cause which produces this strange natural phenomenon is easily understood when the effect produced by a wall or dam being built across a river is considered. In such a case, as is generally known, the channel fills up to the level of the top of the dam with rocks, stones, and silt, the slope of the bed of the channel merely affecting the rapidity with which the operation is performed. Thus the plain above the Mulpurba dam has risen to the level of the mouth of the cutting; and as the latter wears down the channel of the stream will fall.

The deep narrow chasms cut through the mountains of Abyssinia by the action of flowing water are not peculiar to that country. In North-west America the river Colorado has performed the same operation on the most gigantic scale. The

chasm or cañon on the Colorado, the bottom of which is said to be unapproachable for a length of five hundred miles, is from 3,000 to 6,000 feet in perpendicular depth.*

The natural operations described above refer only to the penetrating powers of flowing water when obstructed in its path. Other similar processes exhibited in Abyssinia, more vast both in cause and effect than those at work at the Abyssinian defiles, will receive notice hereafter.

Our Reconnoitring Party left Hadôda, which was 480 feet above the sea, at daybreak on the 12th November, escorted by a detachment of the 3rd Bombay Cavalry in charge of Lieut.-Colonel Loch, second in command of the regiment. Our route lay across the plain, about three miles in width, towards the base of the mountains. This plain, as usual, was covered so thickly with the thorny mimosa, which here grew to a larger size than we had before met with, as to prove a constant source of detention and annoyance. To add to our perplexities, another thorny tree, the bair, the thorns of which are shaped like the claw of a cat, grew in profusion on the plain; and we were not sorry when we arrived at the bed of the Hadâs, although we fared but little better as to progress in its dry channel. The river-bed was covered

* BELL'S *New Tracks in North America.*

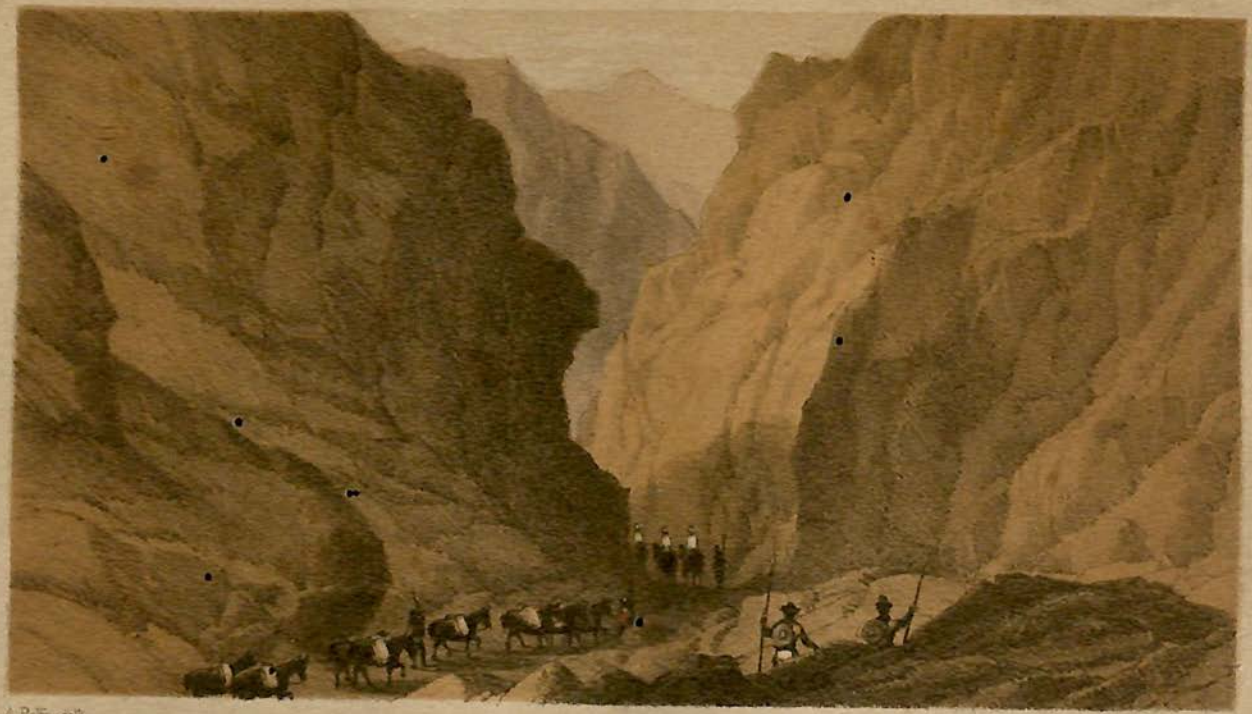
with rocks and stones, rendering the march tiring for the horses and mules. The Hadâs soon took us into the mountains, and shortly after we passed by the junction of the route from Massowah and Harkîko. Eight miles from Hadôda we arrived at a place named "Hamhammo" mentioned by Bruce and other travellers. We did not stop at this place, but the natives said there was a small supply of water in a pool. No village was seen, but there were a few natives about with flocks. Following up the Hadâs for eleven miles, we at length reached a magnificent chasm in the mountain, about forty feet in width, the rocks on either side rising to a great height, perpendicular on one side, and overhanging on the other. This chasm had been cut by a tributary of the Hadâs in the mountain at the side of the river. The Hadâs itself turned at this point to the left, and issued from a ravine at great depth bounded by steep and lofty mountains. The chasm, which was only a couple of hundred yards in length, as usual in these defiles, had a small stream running through it, the spring issuing from under a rock at the upper end. This watering-place was called "Illeleia," and we took up our position for the night under the overhanging rocks, no tents being required, as the sun did not penetrate into the deep gorge all day. On discussing the morning's march, it was universally agreed

that the ground traversed in the morning was, excepting the Sooroo defile, about the worst we had yet met with. The plain from Hadôda was impracticable for troops, owing to the thickness of the thorny jungle; and the bed of the Hadâs was worse still, in consequence of the masses of rocks and large stones with which it was covered the whole way.

Shortly after our arrival at Illeleia, we were favoured with an instance of the insubordinate conduct of the Egyptian muleteers. These men, owing to their well-known proclivities, had been expressly warned not to molest the natives of the country or their flocks, yet they could not make one march out of camp without doing both. Some Shohos came into our camp, and complained, through their chiefs our guides, that the Egyptians had stolen a sheep from a flock met by the way, and, when detected and accused by the owner, had beaten him. The Egyptians now indignantly denied the accusation brought against them, and declared that the carcase of the animal, which the Shohos pointed out in their camp, had been brought by them from Hadôda where they had bought it. As they had no sheep with them when they left in the morning, and the body was quite warm, only just having been killed, and the skin was not forthcoming, the proof of the theft was clear. The Chief

Mohammad, in whose district the robbery had taken place, turned up his eyes and the palms of his hands, saying, that his authority would be degraded for ever if justice was not done. As the gorgeously dressed mukkadum, or head man of the muleteers, attempted to screen his subordinate, who was very insolent, Colonel Merewether determined to make an example of the two Egyptians for the benefit of their comrades. Accordingly both men were made prisoners; the mukkadum was deprived of his riding pony, and with the muleteer had to accompany us on foot, as an example and warning, until we returned to the coast, when they were deported to their own country. The Shoho was also paid the value of his sheep. In the evening we were enabled to obtain a fresh-water bath, one of the very few enjoyed during the eight months we were in the country, and at sunset, with the welcome addition of Colonel Loch, we formed a sociable party of six under the hanging rock of Illeleia.

It was intended, and we were all ready to start early in the morning as usual; but as Colonel Merewether never marched until the baggage-mules were under weigh—and the Egyptian muleteers were very sulky at the punishment of their chief and comrade, and unskilful besides—we did not get off till near 7 A.M. We turned out of the chasm of Illeleia,



A.Rolfe del.

M&N Hanhart imp

ENTRANCE TO HADAS PASS, ILELEIA.

London. Smith Elder, & C° 15, Waterloo Place 1870.

1,540 feet above the sea, and re-entered the bed of the Hadâs torrent, which was much contracted in width as it emerged from the loftier mountain ranges. The pass was about eighty feet in breadth, the sides, after passing the entrance, becoming precipitous. The floor of the pass was so abominably rough, being blocked up with rocks—a stone quarry would have been easy walking compared with what we had to climb over—that we had to dismount and walk for some distance. The ravine presently widened out to 120 feet, the track still crossing most terribly rough ground. Our horses were getting used to this kind of thing, and had learned to look down and pick their way. Rassâmo was quite at home and required no guiding; but the troopers' horses may be said to have been thoroughly disgusted with their novel mountain marching. About two miles and a half up the ravine we arrived at a place named "Deema." Here we found a running stream which we followed for about two miles, when it ceased. Three miles further over very rough ground took us to a spot bearing the euphonious name of "Tubboo," where, finding a good stream of water, we were glad to halt for the day, our animals having had a fatiguing march over execrable ground. Tubboo, eleven and a quarter miles from Illeleia, was measured to be 2,930 feet above the sea. The place of our encampment was well shaded

with fair-sized trees, and altogether the Hadâs ravine, far more contracted than the Komaylé, was much better clothed with trees and shrubs; but the bed of the torrent was very bad travelling. Here we obtained a few ducks and teal; but we also found, what was not so agreeable, that the valley swarmed with tics, which attacked the horses. Washing their fetlocks and feet with brine protected them, we found, from these disgusting vermin.

Major Baigrié, of the Quartermaster-General's Department, who met us at Hadôda on our way up, had surveyed the Hadâs as far as Tubboo. His drawings of the pass, and, indeed, all his sketches give very accurate representations of the country, which certainly presents a fine field for the draughtsman in search of novelty.

We left Tubboo at 5 A.M. the next day, and continued our journey up the valley of the Hadâs. The dry channel of the river followed a serpentine course, every jutting spur from the bordering mountains causing it to take a turn. The track led up the centre of the dry river, but, at each turn, made a short cut over the bank, threading through thick jungle of mimosa, tamarisk, bair, wild mangoe, and numerous other trees and shrubs, and occasionally passing a large peepul or sycamore. The ravine changed its direction eight-and-twenty times on this day's march, and presented a series of magnificent

views; high mountain peaks, with clouds hovering on their sides and summits, peeped between the openings of the nearer hills. It was rather difficult work writing down the names of the mountains and ravines whilst riding over ground which might have been the battle-field of two rival armies of Titans, which, meeting in the valley, had torn up the cliffs, and hurled showers of rocks at each other. The biggest mountains certainly seemed to have the hardest names, such as one we noted after good Chief Mohammad had repeated it half-a-dozen times. This name "Haggleliggleot" fairly broke one's pencil's point and filled up the page. In the first mile we passed the mountain of the impossible name given above on the left hand, and "Kafiso" on the right; and between the second and third mile "Ibut" on the left and imposing Kafiso again, and the mouths of the side torrents "Allelie" and "Adobalo" leading from each mountain respectively. Allelie had a small stream of water. At the end of the third mile the ravine widened to 300 feet, and here the Gobailé torrent-bed from the lofty Adoodaga joined the Hadâs on the right. On the summit of Adoodaga the Shohô Câdi, or Chief Justice, was said to reside. At the end of the fourth mile the Hadâs ravine contracted to 200 feet in width, the Tareguddé torrent, from the mountain Girgiro, falling into the valley on the left hand, near the

termination of the sixth mile. The route passed round the bases of the mountains Izago and Arbuttoo. At the end of the seventh mile the watercourse from Pokaité on the left and the Kokana on the right, joined the Hadâs. Such is Abyssinian geography, taken from an explorer's note-book, which is interesting to but few readers, however much it might be to himself when obtained at the risk of a header down a ladder of rocks. Rassâmo, however, was very knowing, and, in addition to the clever manner in which he carried himself and his rider over perpendicularities with the rein on his neck, he always avoided going too close to bushes or under trees, one memorable moonlight night excepted, when he nearly left his rider, like another Absalom, suspended behind him, a thick blanket under the saddle and an English helmet being omitted in his calculation of heights and distances. Altogether, Rassâmo was a scientific mule, and eventually became a complete surveyor. His subsequent history is unknown, but may be conjectured; for the exigencies of the service carried him into the Transport Train, which drove so many of his companions to the bourne from which so few four-legged travellers returned.

As we approached the end of the march the ravine narrowed to 100 feet, and the view, as we turned the last bend in the river, was very pic-

turesque. The tents were pitched under the shade of a large peepul tree, and within twenty yards of the spring of Mahiyo, which here issued from the rocks in the usual manner. Mahiyo was eight miles from Tubboo, and 3,700 feet above the sea; the maximum temperature 77°, and the minimum 62°.

Until the time when Phayre and I became united in the military bonds of Bohemian life, I was accustomed to pride myself on being an early riser, but I was now undeceived. No matter what hour I woke, whether three or four o'clock in the morning, depending upon the time of departure fixed the previous evening, so surely I became immediately sensible of a strong odour of coffee pervading the canvas apartment, and of the presence of a dimly diffused light. I verily believe Phayre's attendant, "Multum-in-parvo," was in the habit of commencing the preparation of his master's coffee the moment he turned in for the night, so as not to be late. When Multum slept is a mystery, it must either have been at midday when his master was climbing inaccessible mountains with impossible names, or not at all probably the latter.

We were not sorry to vary our fare with a little game in the shape of wild duck and teal, obtained at Mahiyo. Phayre and I took a Mansfield-Parkynsonian shot at the game on the water of

Mahiyo, the true value of which method of shooting we had come fully to appreciate.

We left Mahiyo at 5.30 A.M. for Maderto, a reported watering-place. The torrent wound in and out in an interminable manner, but the route being frequented by the natives and their cattle, we availed ourselves of the numerous short cuts made by them through the jungle. About a mile from Mahiyo, we arrived at the foot of the mountain, up which a steep path leads to Halai and Dixan. This route by the pass of Shumfaito, was the one taken by Dr. Beke in 1866, and stated by him to be of a similar character to the adjacent and better known pass of Taranta, which diverged from the Hadâs about two miles below Mahiyo. Dr. Beke was five hours ascending Shumfaito. Bruce, Salt, and other travellers took the modern kâfilah route by Taranta; and Bruce, who had followed the exact route taken by our party, by Hamhammo, Sadoon, and Tubboo, in 1769, pathetically describes the difficulty he experienced in getting his heavy quadrant up the mountain. He literally experienced a sea of troubles; for while at Hamhammo on the 17th November,—we passed it on the 15th November,—a storm in the mountains brought down the Hadâs. Bruce states that when at this place he and his party suddenly heard a noise in the mountains above, louder than the loudest thunder, upon which the

guides flew to the baggage and removed it to the top of a hill. This was no sooner done than the river came down about the depth of a man and the whole width of the ravine. It soon ran out, for Bruce rode up the torrent-bed the following day. He speaks bitterly of the damage done to the faces and hands of his party by the thickly growing thorny acacia.

It was not our intention to follow Bruce and Dr. Beke up to Halai. We were bound for Tekoonda on the highlands, situated further south than Halai, which was out of our way. We therefore remained in the valley of the Hadâs, which was here about eighty feet in breadth. The ravine now opened out as we proceeded, and, a little under three miles from Mahiyo, we came to a plateau large enough to accommodate the wing of a regiment. A thousand yards beyond this plateau, the Gari-Methur ravine, containing, as stated by the guides, a supply of water, joined the Hadâs. Here the ravine contracted to a width of only eighteen feet between walls of solid trap-rock. This Tahazit defile, three miles in length, varied from ten to forty feet in width only; and at one place the rocks closed in to three feet at the bottom. The rock of this pass, the toughest description of basalt, was free from fissures, which accounts for its not having been more worn away by the water of the torrent, and for

its polished faces and rounded angles. Moreover, the source of the Hadâs was not far distant. There were two small springs in the Tahazit defile at very low ebb at the time of our visit.

On leaving this defile the ravine spread out, but there was a great increase in its slope, and in the accumulation of stones, very annoying to the horses. The bottom of the ravine was covered with jungle, but whilst the western slopes were well clothed with foliage, those on the eastern side were nearly bare. Here, for the first time, a monkey was observed. He was looking down from a tree-branch upon our cavalcade passing beneath him. He appeared to have white whiskers, but his body was concealed. Baboons were constantly seen in the passes. A colony of the dog-faced baboon inhabited the rocks at Hadôda; another at Komaylé and Sooroo, where they used to amuse themselves later on in acrobatic performances on the telegraph wire. The large males very stately in their walk, with colour and mane like a lion, and face like a dog, were perhaps taken for the kings of the forest when seen at a distance.

Two miles above the Tahazit defile, we arrived at Maderto at the foot of a steep rise to the highlands. Maderto was in a basin, the edge of the highlands encircling the Hadâs and other subsidiary ravines. From Mahiyo to Maderto, a distance a

little over nine miles, we changed our course no less than sixty times. This will give some idea of the tortuous character of these ravines. As the mountain before us appeared impracticable for horses, it was resolved to encamp at Maderto, although the water supply was very bad, simply a dirty pool in the rocks. A high portion of the table-land towered over our camp on the right, and looked unpleasantly close if occupied by enemies. This was the *amba* or fort of Deria. The top of this hill-fort was naturally scarped, the upper stratum of light grey sandstone having fallen away, in a vertical direction, by the action of the weather. The salient angles were worn and rounded, giving the scarp the appearance, at a distance, of an artificial fortification with circular bastions. The Shohos stated that this *amba* was only accessible at one point and contained a spring of water. It belongs to Tigré, and commands the approach to the highlands by the Hadâs valley.

Up to this time, with the exception of one or two travellers proceeding to the coast, we had never fallen in with any Abyssinians or subjects of Prince Kâsa of Tigré, the rising man in Northern Abyssinia. That our progress in the mountains had been watched by Kâsa's spies we had little doubt, but we had never come into contact with them. Our arrival at the foot of the ghaut leading to Tekoonda had evidently been the subject of sus-

picion or curiosity; for, although Maderto was at least three hours journey from Tekoonda, very shortly after the tents were pitched at the former place, a chief from Tekoonda came into our camp. This man seeing the smallness of our party, and knowing the guides, did not hesitate in presenting himself. He probably came to try and discover our intentions to enable him to report them to Kâsa; for he behaved in a friendly manner—the better to gain information. Colonel Merewether's plans and policy were not shrouded in any mystery; they simply emanated out of, and were subservient to, the intentions of the English Government, as announced to the Abyssinians by the Commander-in-Chief of the Expedition in his proclamation, which Colonel Merewether had disseminated through the country. The Tekoonda Chief learning that we wished to see the highlands, although Colonel Merewether did not desire to go near the village of Tekoonda, he at once offered to show the way, and act as our guide.

Not to lose time, our Reconnoitring Party, accompanied by Lieutenant-Colonel Loch, and attended by the Tekoonda and Shoho chiefs, set out to ascend the steep ghaut leading to the Abyssinian plateau. We took mules, but did not use them much in the ascent, and not at all in the descent, owing to the rugged precipitousness of the track which wound up the

side of the ravine from our camp at a gradient of one foot rise to three or four in length. Although in places the gradients became easier, and two-thirds of the way up a plateau on a spur of over a mile in length, with a few rises, was crossed, yet, on the whole, the route was worse in character than anything yet seen, worse even than the Brinjarree tracks up the western ghauts of India. The length of ascent on the slope was two miles twelve hundred and fifty yards, as afterwards measured by Colonel Phayre's Guides; and deducting the level portions, the whole ascent of 1,477 feet was made in a length of one mile a thousand and thirty yards, giving a gradient of one yard rise to 5.67 yards length of slope. It is necessary, however, to state, that some portions of the track, only one foot in width, had a gradient as steep as one rise to two in length. The gradients were really steeper than one in 5.67, for portions of the track, after a fatiguing ascent, descended again in places, in a most annoying manner, thus losing some of the height gained. One part of the path, where it passed along the precipitous side of the ravine, was not more than two feet in width to the edge of the precipice; and this two feet of slippery rock had a disagreeable transverse slope towards the abyss below.

After a climb of an hour and a half, at Colonel Phayre's usual express speed, we, for the first time,

stood on the table-land of Abyssinia. Looking down the steep gorge we had ascended, the view was very beautiful, the ravines being covered with a thick jungle of the graceful juniper-tree, called by Bruce "cedar;" but although not the real cedar, it is of the same genus, and the wood, when split up, has the same delightful perfume. The colour of the wood is also similar to that of cedar. As Tekoonda could not be seen from the top of the ghaut, the Chief led us across the plateau in the direction of that village. This Abyssinian plain, by name "Denda," was about a mile-and-a-half square. It was devoid of trees, but appeared to have been cultivated, although quite bare of crops at this time. In many places the plain was divided into fields by raised earthen boundaries. The soil and rocks were of a red colour, and the general appearance of the country was very similar to that of a plain of the Deccan in India. The Denda plain was bounded on each hand by steep mountains, isolated into peaks with flat summits on the right, those on the left forming a range by name "Koheito." The peaks all presented the same light grey sandstone superstratum, denuded into steep cliffs, very similar in outline to the hills in the Deccan, and forming by position, in a very complete manner, strong natural posts for the defence of the approach to Tekoonda. After pro-

ceeding a mile over this first plateau, a second, of pleasant green hue, made its appearance a hundred feet below us, about two miles distant, and the village of Tekoonda, perched high up on a spur of the hills which bounded the distant plain, came within view. This green plain, the Tekoonda Chief said, was the "King's Camp;" so called, because whenever the rulers of the country visited Tekoonda, their camp was always pitched on it, as it provided both forage and water. After a little bad travelling between the plains, we arrived at the King's Camp at 3.30 P.M. The plain was covered with barley stubble and green turf, slightly scorched. It was refreshing to see the bright green turf on the banks of the stream; and the air at this hour of the day, owing to the great elevation of the country, was most exhilarating. The distance from Maderto to the King's Camp was something short of six miles, the latter place being 6,700 feet, and the top of the Maderto Ghaut 6,800 feet, above the sea.

Having no time to spare, in order to descend the ghaut before nightfall, we only remained ten minutes at the King's Camp, and, retracing our steps, reached our camp before it was dark, having got through altogether a good day's hard work. In the night the thermometer registered at Maderto —5,340 feet above the sea—49°; and the morning air was delightfully cool and grateful, as we started

at daylight for a second day's exploration in the mountains on the Abyssinian plateau.

While crossing the Denda plain the previous day, a lofty peak rising out of the Koheito range had attracted notice; and having learnt from the Tekoonda Chief that a great deal of the country towards Senâfé, and possibly the sea, would be visible from its summit, it was determined to ascend a second time to the highlands, for the purpose of climbing the peak of Koheito.

The Maderto ghaut did not improve on acquaintance, and after a breathing walk we stood once again on the highland of Abyssinia. Crossing an angle of the Denda plain to the left, a short walk brought us to the foot of Koheito. Here commenced a rugged ghaut track, if anything more fatiguing than that of Maderto, the rise of over a thousand feet being on one gradient excessively steep. It is quite sufficient exercise to ascend and descend such heights even if the path be clear and on a fair slope; but these Abyssinian staircases are covered with loose blocks of stones of all sizes. A traveller must make up his mind to do one of two things—either to walk on the surface of the ground on which the stones rest, picking his way carefully between the blocks, as mules and cattle do; or he must take the higher level and tread on the stones themselves. He cannot do both without extra

fatigue, and although his attention has to be constantly concentrated upon the ground in front, it is, perhaps, easier, with the aid of a lance-shaft, which is indispensable, to walk on the stones, human feet being long and narrow, and not fitting well the round holes worn by cattle between the rocks.

On arriving at the top of the ghaut, we found ourselves at the base of a white sandstone cliff, the white bluff capping seen on all the loftier mountains in northern Abyssinia. From the summit of this peak of Assuat a fine view of the table-land was obtained. The chief points in view were the curiously shaped conical mountains of Adowa; the Tedra needle peak on the River Mareb; the Tekoonda, Agówmeder, and Halai districts; Mount Suera and the Humbugtoo peaks. Finding that Assuat, though standing high above the Koheito range, was not near the edge of the table-land, and was overtopped by a mountain two or three miles distant, after taking a series of observations and measuring the height at 7,674 feet,* we descended the cliff, and made the best of our way across the intervening plateau, which was intersected by the head of a deep ravine. We soon came upon the sandstone again, and ascended easily to the elevated ground which culminated in two cones. On sur-

* The height given in the Trigonometrical Survey—8,388 feet—is, probably, correct.

mounting the highest point, we, in a moment, had presented to us what must be regarded as one of the grandest views in the world. We stood at the very edge of the table-land, on one of its most elevated points, the extremity of a promontory or finger of the high land, hanging over the sea of mountain ranges and spurs which act as buttresses in support of the extraordinarily elevated land of Abyssinia. Our promontory terminated in the most abrupt manner. We stood, as it were, in the air, the earth disappearing within a few feet of us to return to view many thousands of feet below. If, as has been advocated even at the present day, the earth is a level plane, we now stood looking over the edge of it! It is a pity Cosmas, who travelled in the Red Sea and visited Adulis or Zulla in the year 520 A.D. in search of some proof of the same idea as that above mentioned, * should not have visited this peak of Tsaro. What a range of view was there! Was ever such a sea of mountains brought into the field of view from one point before? It may be doubted. The mountains of our old ravine from Komaylé to Senâfé, which we had regarded as being of such enormous height, now appeared as small hills. The ravine could be traced for the greater part of its length; and the Mudhullo torrent-bed, up which we had been

* MARKHAM'S *Abyssinian Expedition.*

misled by the guide when leaving Ḅurrukguddé, was far below our feet. The highland scarp round by Senâfé to Mount Suera was well defined; but although that mountain exceeded Tsaro in height, and Abyssinia contains many mountains far loftier, yet it is probable there is no view in the country exceeding in grandeur that from the peak of Tsaro; for the following reasons. The whole elevation above the sea of Tsaro, namely 9,000 feet, * was visible in one view from one point. The mountain fell away precipitously for two-thirds of the circle, and the view of the lower mountains and lowlands occupied an angle of 220°. From few mountains can such a depth be looked down into at so short a horizontal distance. Annesley Bay was visible with a telescope; and Lieutenant Dawes' fleet of native craft was seen in the act of crossing it in full sail. As the horizon always rises to the eye, the white sails appeared like sèa-gulls in the clouds. The shipping at Zulla bore 43° north-east. Our old friend Humbugtoo beginning to turn a deep blue-grey warned us not to dally too long on the summit of Tsaro, so reluctantly we turned our heads homewards, the Maderto ghaut in the dark being a terrible bugbear before us. The Abyssinian mountains having serrated ridges and steep slopes, and being altogether of a very precipitous character,

* Trigonometrical Survey, 9,048 feet.

and all ranges trending in one direction from one elevated margin, the view from Tsaro was far less beautiful, though grander, than those obtained from Mount Lebanon, Mount Olympus in Asia Minor, or from the Alpine passes. There is nothing romantic or lovely in this Abyssinian scenery, for the mountains are not clothed in green raiment of varied hue; neither are waterfalls, or winding streams shining like quicksilver, to be seen meandering down the shady valleys. No, the picture is vast and grand; but the colours are cold and grey, and produce a landscape which appeals not to the innate feeling for beauty, but rather to the surprise and wonderment of the beholder.

On our way back to Assuat we came across some old ruins, but it would have required the speculative credulity of a Pickwickian to have made anything out of them. The Greeks from Adulis may have erected buildings here, but Dr. Beke considers they went to Axum by Halai; and subsequently, when driven from the mainland to Dissee Island, that they took some line from Buré to Senâfé. This may have been the case, but we are now aware of the great natural obstacles which are presented to any route from Buré to Senâfé.

In due course, our party descended the Assuat and Maderto ghauts after an almost uninterrupted Alpine climb of thirteen hours.

A message reached the Tekoonda Chief just as we arrived at the top of the ghaut, with a report that Dajjâj Kâsa, who had thoroughly defeated Theodorus' governor of the province, had occupied Adowa, and received the subjection of Tigré. Also that he had declared his intention to oppose the British. The latter part of this information did not obtain much credit with us. Subsequently Colonel Merewether received a letter, expressing friendship for the British, from the Chief of Halai as the exponent of 20,000 inhabitants of the 120 villages of the district.

In the evening thunder was heard in the distance below us, and our camp was visited with a shower of rain; thus giving warning that we might not escape on the return journey from witnessing, as Bruce did, the effects of a storm in these mountains.

Retracing our steps down the Hadâs the following day, only one night's halt was made at Allelie—Lions' Water—before reaching Illeleia. Rain fell at both places, but not sufficiently to bring down the torrent. At Hadôda we found the disease, which had made such fearful havoc amongst the horses and mules of the expedition up to the end of January, had commenced with alarming virulence in the ranks of the 3rd Bombay Cavalry. This disease, popularly termed the "African glanders," when contracted by a horse or mule, generally ran its fatal course in a

few hours, after the first symptoms of loss of appetite, and swelling of the glands of the head and neck, made their appearance. Our party did not remain twenty hours at Hadôda, but we were not to escape the fell disease. Colonel Phayre heard there of the death of one of his horses left at Komaylé, eight miles off, and in the afternoon Colonel Merewether's old charger, Rob Roy, showed symptoms of the complaint; whilst the moment I mounted Theodorus the next morning I felt he was doomed. Large doses of quinine and stimulants kept him alive for two or three days, when he died in great agony. Rob Roy, wonderful to say, recovered, but another horse of his master's succumbed in his place. It may be taken for granted, as the result of experience and local information, that the lowlands adjoining Abyssinia are fatal to horses and mules during the months of November, January, and February. Massowah has always been considered a deadly place for horses, and an Egyptian detachment of cavalry posted at Arâphillé a year or two previous to our arrival lost 120 out of 150 horses. Camels and cattle do not suffer from the African glanders.

Our party arrived at the old camp at Zulla on the 21st November, having made a satisfactory completion of the reconnoissances of the two routes to the highlands by the Komaylé and Hadâs ravines.

All opinions coincided in the selection of the Komaylé route to Senâfé, as the one to be adopted for the march of the British army from Annesley Bay to the highlands, and for the following reasons :—

1st. Senâfé was sixty-three miles, and Tekoonda sixty miles from Zulla; but Senâfé being on the direct route from Tekoonda to Magdala, the length of the Tekoonda route was to be estimated at not less than seventy miles.

2nd. The gradient of the Komaylé ravine towards Senâfé of 1 in 40·8, left a small ascent at its termination compared with the Maderto ghaut at the head of the Hadâs Valley, entailed by its easier slope of 1 in 42·8.

3rd. The engineering difficulties of the two routes were largely in excess on the Hadâs; for whereas on the Komaylé line engineering operations would be required at the Sooroo and Rahaguddé defiles, and at the ascent at the end—about eight miles in all—to make it passable for batteries of artillery; on the Hadâs line, nearly the whole route from Hadôda to the top of the Tekoonda ghaut, a distance of forty-two miles, would require sappers' work and skilled superintendence. It was true, no such formidable obstacle as the Sooroo Pass was to be found in the Hadâs valley; but this pass was only four miles in length, whereas the eighteen miles

from Hadôda to Sadoon would require a vast amount of labour to make it practicable for wheels.

4th. The Tahazit pass on the Hadâs line was extremly narrow, and would entail rock-blasting operations.

5th. There was an ample supply of water at the Sooroo and Rahaguddé defiles; but there was none to be obtained between Mahiyo and the King's Camp, a distance of fiteen miles, which included the ghaut, requiring so much labour.

6th. The chief objection to the Komaylé route was the length of march from Upper Sooroo to Rahaguddé, twenty-nine miles without water; but this was far overweighted by the numerous objections to its rival given above.

All things considered, it is not very surprising that this Komaylé valley ravine, as a route to the highlands, should have been so little known as never to have been spoken of to travellers visiting the country, or even to the resident Consuls at Massowah, prior to the arrival of our Reconnoitring Party in the country. The Sooroo Pass, or gorge, alone would sufficiently account for this circumstance. This narrow pass of thirty feet, between perpendicular walls of immense height, is blockaded for five months in the year by the effects of storms during the highland rainy season. Travellers and caravans, if caught in the long defile on such an occurrence,

could not possibly escape destruction. Of this fact, the natives of the country must have been well aware. Then, after the cessation of the rains, the masses of rock scattered about by the overwhelming power of the torrent, obliterate all old tracks, and form yearly new barriers to progress, which at any moment are liable to assume an absolutely impracticable character. Unless the people of Adulis were in the habit of keeping the Sooroo Pass clear during the fair season, which is hardly probable, the route by Komaylé could not have been much, if at all used by them. It is more likely that, as before mentioned, the Greeks followed the valley of the Hadâs; and when some centuries back, the port of Adulis was forsaken for that of Massowah, and the Hadâs ravine still held its position as offering about the best route to the highlands, the Komaylé valley, as a route, fell out of knowledge and use altogether. It is quite sufficient for most Eastern nations to know that their forefathers held to one course and custom for them to adopt the same. It is not intended to assume that this Komaylé valley was utterly unused or unknown to all the natives in the country, for, of course, there is not a valley in the whole land which is not used as a local route by the natives in the immediate neighbourhood. But it is almost certain, that the British Force entered Abyssinia by an entirely new route through the mountains,

which, with the aid of their means and appliances, they were enabled to convert into a far better road than had ever been obtained in ancient or modern days. Still, without the assistance of the mechanical arts, constantly applied in the removal of ever-forming natural obstacles, the discovery can prove of little benefit to the country in general. The natives will very soon revert to their old steep and fatiguing tracks, which require no expenditure of labour to keep open.

At Zulla, as far as was in the power of those on the spot, matters were progressing satisfactorily. Most of the departments required more labour than was available; but this was to be expected where so much was to be done, where the country provided such a poor and limited supply of labourers, and where every one wanted his own stores to be landed first. Major Mignion had made great progress in landing his commissariat stores, and in organizing the irksome duty of issuing rations. The fleet of native craft had brought over a sufficient quantity of stone from the peninsula of Buré to enable Captain Goodfellow to construct stone sea-walls to his pier. The plant for a short tramway and the skeleton commissariat sheds having arrived, progress had been made in laying down the one, and in erecting the other. Captain Edye, R.N., of H.M.S. *Satellite*, who never recovered from the effects of the climate,

and whose loss must be sincerely regretted by every one who was in any way connected with Zulla throughout the campaign, had taken in hand the arrangements necessary to provide the fresh water distilled from the sea required for the camp. He commenced the formation of a naval depôt on shore, and collected at a convenient spot all the iron ship tanks that could be spared from the shipping for the storage of the condensed water. Captain Edye, a noble type of the profession to which he belonged, and his sailors, were the life of the bunder, and infused a spirit of cheerful zeal into all the landing operations, which remained in his hands till the arrival of Captain Tryon, R.N., who had been appointed Director of Transports. There were no idlers at Zulla. The whole work was practical and executive, and necessitated much exposure to the great heat of the sun. Though the end of November was approaching, the temperature in the shade at noon still hovered about 100°. But, perhaps, an equal, or greater enemy than the heat, was the daily dust storm, which overwhelmed everything and rendered life a burden.

Whilst the work of all the departments of the army, with one exception, was progressing as favourably as could be expected with a base situated 2,000 miles away across the sea; that one exceptional department, represented at Zulla by only a few

officers, was placed at its wit's end to produce order out of chaos. The confusion and failure of the Transport Train in its earlier stages cannot fairly be laid to the door of any single individual, department, or Government. It must be attributed to the military system, which in India requires no such aid, and the extraordinary nature of the demand which suddenly arose for such establishments, as could only be efficiently met by a well-organized and experienced branch of an army. The Indian Army is now an army of occupation; of defence, not offence; and it is seldom called upon for the purposes of foreign invasion. It has, indeed, sent out expeditions to China, Burmah, and Persia, but these invasions did not necessitate elaborate land transport departments. The Persian expedition was provided with a Transport Train; but the object of that campaign was to strike a blow on the coast, and thus bring, as it did, the Persian Government to reason. Operations in the interior of the country were not contemplated, and not being rendered necessary, the transport train raised for the occasion was not called upon to develop itself to any great extent. The case was totally different with regard to the Abyssinian campaign. Here the objective point was situated 400 miles from the coast, a coast unprovided with natural supplies of forage and water. Not only was the country defi-

cient in this respect on the sea-board, but for five marches inland, marches through desert mountain passes of extreme ruggedness, no supplies of forage could be relied on. An enormous transport train was therefore an absolute necessity; not only for the conveyance of materials of war and provisions for the troops, but also for the carriage to the highlands of forage for the animals employed on this work. If a mule carries 200 lbs. and consumes 17 lbs. *per diem*, the calculation of the weight delivered by each mule on the highlands is easily made. Supposing, which was the case, forage was obtainable at Senâfé for the mules while there, a mule travelling from Zulla to the highlands and back, would consume eight days' forage out of the 200 lbs. weight carried up. The balance of 64 lbs. delivered at Senâfé would represent ten days' work of a mule in good condition, not counting rest at either end of the line. A convoy of 100 mules delivering on the highlands 200 lbs. of forage, provisions, or stores, or 20,000 lbs. in the aggregate, required sixty-eight mules to carry their forage; the sixty-eight mules forty-six others; the forty-six mules thirty-one more; and so on. It therefore required 300 mules to deliver 20,000 lbs. at Senâfé, or 200 per cent. in addition to those animals required to carry the 20,000 lbs. In other words, reducing the calculation to units, every mule pro-

ceeding to the highlands required two others in attendance to carry the forage of the three.

Land transport in India is carried out on a system peculiar to the country, and is managed under a kind of hereditary organization, which has existed in the country from time immemorial. There is no difficulty about transport in India. It is the business of a certain class of the population, who are ever by birth and profession engaged in it; and all that is necessary to secure its efficiency is prompt payment. For the Abyssinian transport, mules and a proportion of camels could only be relied upon. To obtain these in sufficient numbers, as India could only provide a small contingent, Europe, Asia, and Africa had to be ransacked. If India had been able to provide the transport, no confusion would have ensued. As it happened, mules from Spain, Italy, Egypt, Syria, Persia, and other countries, were thrown upon the coast at Zulla without equipments, for which the Bombay Government was not accountable, and with such a class of muleteers to attend them as could never have entered the minds of controlling authorities to suppose could exist out of jails and penal settlements. Alexandria is a cosmopolite city, but what was the famed port of the Ptolemies compared to the Babel of Zulla on the arrival of the Indian, Spanish, Persian, Turkish, Arabian, Egyptian, Albanian, French, Italian, Ger-

man, and English muleteers? The mild Hindoo, and a few of the English and other Europeans, behaved on the whole in a praiseworthy manner; but what can be said of the others, but that they emulated each other in uproariousness; quarrelled in unknown tongues; fought in defence of nationalities; and only agreed in neglecting their charges, and in disregarding all authority. Contractors for the delivery of camels at Zulla omitted to provide forage for them during the voyage, and turning those unable to walk on to the Zulla plain, considered, until the Transport Train officers enlightened them to their dismay, that that act was sufficient to entitle them to payment. Mules sent from Europe, having a good deal of spare time, occupied themselves in the praiseworthy act of devouring each other's ropes and equipments, which enabled them to proclaim liberty, equality, and fraternity, on the despotic shores of Africa. At this time the officers of the train, full of British zeal and energy, worked not only like officers, but also as good muleteers. Their laborious attempts to control their unruly bands of muleteers failing to produce the desired effect, they themselves set the example by performing manual labour amongst the neglected animals. As soon as the polyglot muleteers, headed by the Egyptians and Persians, found that they were being held responsible for the mules

committed to their charge, if by neglect they lost any, they would coolly appropriate the first that came to hand. When their masters determined to be obeyed by their unruly servants, and compelled submission to some kind of order, they deserted in numbers to Massowah, and generally took some of the mules with them. Such were the adverse conditions the officers of the Transport Train had to contend with at the beginning of the campaign. Means for remedying these evils, and many others it would be futile to relate, were not in the power of the officers of the Train at Zulla, or of the Commanding Officer in the country. But when, in December, the G-14 Royal Artillery, the 33rd Duke of Wellington's Own Regiment, and the Beloochees had landed, Major-General Sir Charles Staveley was enabled to take the unfortunate department in hand; and by lending to it, for a time, the services of disciplined soldiers, to bring about a better state of affairs. From this time the organization of the Transport Train improved, although the dire and uncontrollable disease, which attacked mules as well as horses, sadly interfered with its efficiency.

His Excellency Abd-el-Kader Pasha, deputed by his Highness the Khedive of Egypt to see that every assistance was rendered to the British by the local authorities, and at the same time to watch over Egyptian interests, arrived, at the end of November,

in Annesley Bay in the frigate *Ibrahimerah*, which had escaped destruction at Navarino. The Pasha invited Colonel Merewether and all the officers at Zulla to a banquet which he gave on board his fine ship, which was beautifully illuminated for the occasion. The entertainment was most handsomely prepared, and for once "garbage" fare gave place to a first-rate Parisian dinner, whilst Zulla thirst was quenched not only with a varied collection of wines, but also with pure water brought from the Nile.

CHAPTER VIII.

RECONNOISSANCE TO ADIGERAT.

Alternative Route—Mulkuttoo Abandoned for the Shore—Commander-in-Chief's Instructions—Necessity of Relieving the Base—Of Finding a Healthy Position for the European Soldiers—Colonel Phayre's Memorandum—Colonel Merewether Concurs—Prospects of Reinforcement—Commandants at Zulla—Railway Line—Reconnoitring Party Reassemble—Doctor Austin, Correspondent of *The Times*—M. Munzinger—His Durbar—His Popularity—The Sooroo Gneiss Boulders—Doctor Krapf—March of the Advance Brigade—Mudhullo Torrent—Which is the way?—Maiyen—The Missing Dinner—Rahaguddé—The Visitor—The Abyssinian Speaks English—Reports of Kâsa's Proceedings—Mercha Warké—Commander-in-Chief's Proclamation—Kâsa Feigns Ignorance—Kâsa's Scouts watch the Reconnoitring—Abyssinian hatred to the Turks—The Two Factions—Shoho War Dance—Frost—The Pioneers clear a Road up the Mountain—Table-land at Senâfé—Chiefs—The Nâyib's Contempt—Epidemic—Precautions against Surprise—Robbers again—Height of Suera—Method of Measurement—Alternative Route—Doctor Krapf—Reconnoissance to Tekoonda—Hindoo carried off by a Lion—Wonderful Gorge—A Geological Period—Ill-repute of the Road—Tekoonda—Return—Mercha Warké returns from Adowa—Employment at Senâfé—Three Routes to Adigerat—Reconnoissance to Adigerat by the King's Route—Bahât Valley—River Muna—Church in the Cave—Lycian Tomb Model—Ancient Manuscript—Goona-goona—Fountains of the River Ragoolé—Gullaba Plain—Unaccountable Heat—Ambas Debra Matso and Debra Damot—Extraordinary Appearance of the Country on Two Levels—Power of Water—Khursabur Ghaut

—Deserted Village—Adigerat—Ambas Undul and Aloquor—The Lady of the Fort—Absence of Chiefs—Caravan Route—Locusts—Umbaito Valley—Route Overawed by Forts—Sandstone Capping—Geological Speculations—Native Astonishment—Abyssinian Travelling—Afoo-Hâka—Fortified Post—Grazing Martyrs—Overawed Route—Freebooters—Shoho Prisoners—M. Munzinger assumes the Wig and Gown—His Eloquence—Obtains a Verdict—Sir Charles Staveley—His Energetic Measures—Political News—Theodorus's Spy.

THE reconnoissances to the highlands at two points resulted, as already related, in the selection of the route by Komaylé as that to be followed by the British force. The route by the Hadâs valley was then considered as an alternative line, capable, if necessary, of being made, with the expenditure of much labour, practicable at least for laden mules and oxen. These important points decided, the camp at Zulla became definitely fixed upon as Post No. 1, the base of operations in the country. The camp had at first been marked out at the wells at Mulkuttoo, but as it gradually became apparent that the main water supply must come from the sea, and Major Mignion having urged the necessity of his commissariat stores being situated at the very verge of the high-water line, the Mulkuttoo site was abandoned for a position close to the sea-shore.

The Commander-in-Chief, in his instructions to the Reconnoitring Party, had directed that an elevated healthy spot, with natural supplies of water

and forage, should be sought for in the mountains short of the highlands for the encampment of the British troops, in case they should be detained previous to an advance being made into the country. In their highland explorations the reconnoitring officers had searched in vain for an intermediate position suitable to the requirements of the case. There was no plateau short of the highlands, and no forage; moreover, water was only to be obtained at the bottom of the narrow defiles. Under these circumstances, Colonel Merewether and his companions found it impossible to carry out that portion of their instructions. Nevertheless, at the end of November, when a regular stream of animals began to pour into Zulla, with the immediate prospect of the arrival of a large body of troops, and the African glanders, stated to be confined to the lowlands, was decimating the mules and annihilating the cavalry horses, it became an absolute necessity that the pressure at the base should be relieved; that a healthier position should be obtained for the European troops on their arrival; and that the country itself should be looked to as a source from whence supplies should be drawn.

Accordingly, on the 24th November, Colonel Phayre submitted for Colonel Merewether's consideration, a memorandum of the position of affairs at Zulla, with a recommendation that an advance

should be made on the highlands. The following is an extract :—

"The Quartermaster-General would commence by briefly reviewing the circumstances in which we are now placed at Post No. 1, and its outposts of Uddoda, Weah River, and Koomaylo.

"Contrary to expectation, the lowland rains have not commenced up to the present time, consequently there is no water at Post No. 1, excepting what is condensed on board ship and issued to the few troops and animals at that place. Neither is there any forage except what we have imported from India or Egypt.

"The consequence is, that we have been obliged to station our cavalry and infantry at the nearest watering-places,* where the water supply is sufficient for them, but to which their food and forage have to be carried from Post No. 1.

"The Commissariat Department has experienced great difficulty in maintaining this supply for even the small strength of the advanced brigade, &c., and it is to be feared that a great number of our transport mules have suffered seriously from the hard work of going to and returning from these outposts.

"Superadded to this is an epidemic called the 'African glanders,' which is said to be indigenous to the low country from November to January, has

* Addoda, 15 miles ; Koomaylo, 13 miles ; Upper Sooroo, 25 miles.

carried off a large number of cavalry horses and transport animals, the result of which, should the epidemic continue, may be most serious.*

"We have learnt from our recent tour of reconnoissance that there is no amount of forage to speak of short of the highlands at Senâfé, and were rain to fall now it would be a month before an adequate supply could be obtainable.

"In the interim several thousand fighting-men, followers, and cattle will arrive at Mulkutto. There they cannot stay. At the outposts we could hardly supply them, even were it advisable to try the dangerous experiment of detaining them in the plains.

"The only remedy, therefore, for the present and prospective difficulties in which we are placed appears to me to be an immediate advance on Senâfé with the troops named,† so as to open out fresh sources of supply in respect to water, forage, and cattle from that centre.

"This would relieve the pressure at Mulkutto and its outposts, pave the way for the columns advancing from Bombay and Calcutta, and enable us to complete our reconnoissance so as to decide the exact site of Post No. 2, on the Senâfé highlands, and permanently occupy it.

* Cavalry have lost nearly 100 horses. Number of mules not known, but the number dead and strayed for want of muleteers is considerable.

† 10th Bombay Native Infantry, 3rd Bombay Light Cavalry.

"Our experience of the lowlands for the last six weeks has, I submit, shown us that we cannot possibly subsist a large force there longer than a few days, even in the comparatively advantageous part comprised within the limits of Post No. 1 and its outposts.

"Neither can we hope to touch, far less develop, Abyssinian resources without appearing on the highlands in some force.

"For these urgent reasons, the Quartermaster-General earnestly recommends for Colonel Merewether's favourable consideration, that the advanced brigade be put in movement en route for Senâfé in as light marching order as possible. The same officers of the Reconnoitring Staff as before to join the advance at Rayraguddy."

Colonel Merewether expressed his concurrence in these views of the Quartermaster-General, and Colonel Field, commanding the advanced brigade, was requested, on the 26th November, to co-operate in the movement on the highlands, by setting a portion of his brigade in motion in the Komaylé Pass towards the same point.

At this time, the immediate arrival of a brigade of troops, with a General Officer and Transport Train establishment, was expected. Until this took place, but little could be done for the alleviations of the sufferings of the transport animals, and

for their care; for the means of materially improving the organization of the Transport Train were not as yet in the country. Captain Edye, R.N., of H.M.S. *Satellite*, exerted his utmost to get delivered on shore a sufficient supply of condensed water for the mules to supplement the supply from the wells; and for the health of the camp, Surgeon Lumsdaine was appointed sanitary officer, and he employed a gang of natives for the purpose of removing and burning the numerous victims of neglect and epidemic. Beyond this, nothing further could be effected at this time. The advance brigade, already dispersed at the outposts so as not to drain the water-supply so much needed for the mules, was now, under the exigencies of affairs at Zulla, as already related, compelled to advance on the highlands. This advance could not be made excepting under the guidance of the Reconnoitring Party. It was therefore necessary that Colonel Merewether and his officers should see to its satisfactory accomplishment. Accordingly, Colonel Merewether, having made at Zulla all the arrangements in his power,—that power being extremely limited, seeing that no reinforcements of establishments had arrived from Bombay since the 21st October,—left Zulla on the 1st December with Major Mignion in command. Major Mignion was relieved by Major Beville, who was relieved by Brigadier-General Collings, who

handed over the command to Sir Charles Staveley on the 6th idem.

Having myself remained ten days at Zulla superintending the operations of my own department, I proceeded on the 1st December to inspect the line for the railway which Lieutenant Willans, R.E., Assistant Field Engineer, had been deputed to survey from Zulla to Komaylé. Also, as it was very necessary I should see what work would be required of the Sappers at the head of the pass, which had not yet been explored, and, in arranging for its execution, distribute the whole of the Sappers ordered for the expedition * to the best advantage, I joined Colonel Phayre at the outpost to accompany the advance on the highlands. Colonel Merewether and Assistant-Surgeon W. T. Martin left Zulla the same afternoon, and the old Reconnoitring Party, again assembled at Komaylé, were entertained by Colonel Phayre at his camp. Doctor Austin, correspondent of the *Times*, was also present. M. Munzinger, the indefatigable, was not expected to join till the next day. This gentleman, whose worth became day by day more apparent, whose zeal and industry in the British cause, so valuable at all times, never failed, had proved himself by this time a man of no ordinary ability. While at Zulla,

* Three companies Madras Sappers and Miners, four companies Bombay Sappers and Miners.

from dawn to eve he was accustomed to hold a Shoho durbar in and around his tent, listening with never-failing patience to all complaints, and settling satisfactorily all disputes and arrangements with the natives. All departments sought his assistance in procuring native labour, interpreters, and guides; and his popularity with the Shohos, arising from the strict justice with which he treated them, was quite wonderful. The respect entertained for him was not limited to the coast tribes, but followed him to the highlands.

The next morning the old Reconnoitring Party, accompanied by Dr. Austin, set out for Upper Sooroo, whither Colonel Field had already marched with his regiment, the 10th B. N. I. Newport's 1st Company of Bombay Sappers, now about to be relieved by Lieutenant Leacock's 4th Company, had made great progress with the Sooroo Pass road, which was now practicable for mules and horses, though still requiring a great amount of hard labour to make it available for wheels. The Sappers' work in the pass was rendered extremely difficult owing to the nature of the rock they had to deal with. At first they could make but little impression with their drills on the boulders of gneiss, nor could they split the rocks, as they were accustomed to do in India, with their heavy hammers, called "sutkies." After a time, guided by the more experienced

miners and with better tools, the Sappers learned to drill the tough gneiss; but as large charges of gunpowder could not be used with safety in the removal of the larger rocks, owing to the danger of causing vibration in the overhanging cliffs of the chasm, the work which was cut out for the Sappers in the pass, in preparing it for wheeled traffic, was heavier than any they had been ever engaged upon before.

The moon was favourable for an evening march, so in order to escape as far as possible from the heat of the sun while traversing the twenty-nine miles intervening between Upper Sooroo and Rahaguddé, Colonel Field, accompanied by Doctor Krapf,—who, although well advanced in years, had responded to Sir Robert Napier's invitation to join his force,—set out at 3 P.M. with his regiment and Captain Marett's mountain battery. Colonel Field's intention was to make a bivouac at Maiyen during the night where the well was being excavated. Colonels Merewether and Phayre continued their march the same evening, in order that they might be present with the advanced force on its way up the pass, and also to see that no mistake was made with regard to the route, with which they were now pretty well acquainted. Colonel Field left one company of his regiment at Sooroo and another at Komaylé, which latter was to be relieved by Lieu-

tenant Beke and his company of the Marine Battalion, as soon as the Beloochees arrived.

Remaining at Sooroo for the night in order to attend to the welfare of Newport's Sappers on their way up the pass, our party started shortly before 4 P.M. the next day, accompanied by Doctor Austin. Two Shoho guides were attached to our small force, one attending me in advance, the other remaining with the rear-guard. M. Munzinger had reached Sooroo late the previous night, and hearing of Colonel Merewether's departure, continued his journey all night. His companion and assistant, Father Zechariah, an Abyssinian priest, who spoke French as well as his native Amharic, preferred to join my party, but he knew nothing of the route. At Burrukguddé, two hours from Sooroo, we halted for a few minutes to allow the baggage-mules to close up, and at the end of the third hour we passed Sonâkté, where our exploring party had bivouacked on the night of the 9th November. My guide did not appear to be acquainted with this place, nor was its name familiar to him, which circumstance threw suspicion on his knowledge of the locality. Accordingly, as we proceeded, I kept a sharp look-out for the opening of the Mudhullo torrent, up which we had been misled by the guide on our first reconnoissance. It was lucky I did so, for the Shoho guide persisted that it was the right way with such

energy, that had I not well marked the place in my mind, and had my doubts of the man's familiarity with the valley, I must have believed him and gone astray. The breadth of the ravine and the quantity of jungle intervening between the numerous minor channels, together with the number of detached rocks at the junction of the two streams, rendered the determination of the route at night most confusing; and the weight of evidence on the part of the guide, when, after a search, he pointed out in the moonlight fresh mule-tracks in his direction, certainly appeared convincing. I could not, however, give up my conviction that the guide was wrong, and considering that it was not at all unlikely that some of the party of the previous day had mistaken the road, I turned off to the left from the track we were pursuing, and shortly after had the gratification of hitting off the right ravine well scored with mule-tracks.

At 8.30 P.M. we arrived at Maiyen, and selecting the old place of bivouac, the Shohos very civilly offered their services and soon kindled for us a jungle-wood fire. These natives were superintending the well-digging at Maiyen. They had succeeded in tapping a water-bearing substratum, but had not as yet got deep enough to obtain any very great supply. But, that water had been found was indeed an important fact. The night promis-

ing to be cold, the Sappers and muleteers made themselves comfortable by lighting numerous fires. Dinner for our party had been prepared before leaving Sooroo, but in an unlucky moment Newport's suggestion, that in order to have it handy it should be conveyed in a dhooly or litter, had been yielded to. When comfortably ensconced on our rugs round the fire, loud calls rose up for the precious dhooly, which, it need scarcely be related for the information of those acquainted with the peculiarities of dhooly-bearers, met with no response. Hanging back to indulge in their squatting and smoking propensities, and utterly unmindful of the value of their light though precious burden, the self-indulgent Hindoos made their appearance with the rear-guard at midnight. These men acted their part very well. The rear-guard had driven the lazy fellows before them; but when the encampment came in view, the bearers became all animation, and approaching our fire with a rush, as if finishing a race, and chanting, as is their wont, in loud tones, they deposited the dhooly at our feet with an air and expression of great fatigue, entirely put on for the occasion. Besides ourselves at Maiyen, there was a commissariat party, lately arrived, having lost their way up the Mudhullo torrent the day before. The tracks of this party were those our guide had pointed out. As the bivouac fire went

out, and the temperature fell to 41° in the night, our party was quite ready in the morning for the exercise of a march.

Leaving Maiyen at earliest dawn, we passed on the right, at the termination of the first mile, a ravine containing the dry bed of a torrent, named Undul. This name was often applied to the camp at the Maiyen wells. Shortly after, a couple of Egyptian muleteers were found alone in the jungle. These men had managed to elude our sentries the previous night, and to get off with their unladen animals ahead of our column. They of course hoped to be able to ride the march at leisure, and to join us at the end; but having lost their way, their rascality was now revealed. After a long march of nearly seventeen miles, our whole party arrived at Rahaguddé just before noon. M. Munzinger, in spite of his activity and prior start, had only just preceded us. Colonel Field had taken up a position in the Rahaguddé defile, where his men obtained shelter from the sun and the delights of running water. Colonels Merewether and Phayre had gone up the pass to Senâfé, and while I was resting in the tent after the long morning's march, talking to Dr. Austin, an Abyssinian gentleman made his appearance at the entrance. I at once invited the stranger in, and making him sit down, began to speculate as to who he might be. The visitor, a

middle-aged man, short, sturdy, and cleanly dressed, was in feature and complexion totally unlike any natives hitherto met with in the country; and on my remarking aloud to Dr. Austin that our friend had a very fair complexion for a native of a tropical country, he surprised us not a little by saying in English, without any foreign accent, "I have brought a letter from Prince Kâsa." He then introduced himself as a confidential messenger from that Prince to the British. His name, Mercha Warké, was familiar to me, as I was aware Colonel Phayre had letters for such a person from Dr. Wilson in Bombay. Feeling the impropriety of pumping the Abyssinian during Colonel Merewether's absence, he was informed the Commander would soon return, and we then entered into a general conversation respecting his early education at Bombay, and the general feeling of the Abyssinians towards us.

Agreeably to the orders and instructions of Sir Robert Napier, Colonel Merewether had in October caused His Excellency's proclamation to the people of Abyssinia to be rendered into the native character and language. Copies were then forwarded to all the principal chiefs in Abyssinia Up to the time of Mercha Warké's visit to the British camp, Prince Kâsa had never taken any notice of this proclamation. We had heard rumours that Prince Kâsa was collecting an army of many thousand men at Adowa,

his capital, to oppose the invasion of the British into his territory, and his silence certainly did not look well; the appearance, therefore, of his confidential messenger at this moment of our advance on the highlands was singularly opportune. Mercha Warké, when a youth, had been taken to Aden and Bombay by his father, who, in quest of the medical assistance of the English faculty, whose renown had reached him in Abyssinia, had visited those places. The youth had been educated by Dr. Wilson, the patriarchal and learned missionary of Western India. Colonel Phayre had refrained from forwarding to Adowa Dr. Wilson's letters to his former pupil, from the fear of compromising Mercha and his family; and the Abyssinian himself had doubtless awaited his Prince's policy before declaring himself to his former friends, lately arrived on the coast of his country.

The Commander-in-Chief's proclamation, above mentioned, was as follows :—

"To the Governors, the Chiefs, the Religious Orders, and the People of Abyssinia.

"26th October, 1867.

"It is known to you that Theodorus, King of Abyssinia, detains in captivity the British Consul Cameron, the British Envoy Rassam, and many others, in violation of the laws of all civilized nations.

"All friendly persuasion having failed to obtain their release, my Sovereign has commanded me to lead an army to liberate them.

"All who befriend the prisoners, or assist in their liberation, shall be well rewarded, but those who may injure them shall be severely punished.

"When the time shall arrive for the march of a British army through your country, bear in mind, people of Abyssinia, that the Queen of England has no unfriendly feeling towards you, and no design against your country or your liberty.

"Your religious establishments, your persons and property, shall be carefully protected.

"All supplies required for my soldiers shall be paid for; no peaceable inhabitants shall be molested.

"The sole object for which the British force has been sent to Abyssinia is the liberation of her Majesty's servants and others unjustly detained as captives, and as soon as that object is effected it will be withdrawn.

"There is no intention to occupy permanently any portion of Abyssinian territory, or to interfere with the government of the country.

"R. NAPIER,
"Lieutenant-General,
"Commander-in-Chief Bombay Army."

Mercha Warké stated to Colonel Merewether,

that they had heard at Adowa of our having appeared at Rahaguddé, and then a few days afterwards that we had been near Tekoonda. In fact, they knew pretty well all our movements; but as we had been always on the move, here one day there another, never remaining any time at one spot, they had not been able to communicate with us. Mercha Warké declared that Kâsa had not received any document from Colonel Merewether, although copies had been sent by two messengers taking different routes. The question was probably evaded. The real facts seemed to be, that Prince Kâsa was so much occupied with matters requiring immediate attention in his newly acquired district, that he awaited events without any settled policy, and had been unable to make up his mind whether to oppose us or make friends. The Commander-in-Chief's proclamation must have caused much discussion at Adowa at this time; but the tenour of the document was so admirably suited to the people and the occasion, and so matter-of-fact and precise, that no important point was left open to doubt. The proclamation must have created a favourable impression; and now that the British were advancing in force on Prince Kâsa's province of Tigré, he at last made up his mind, or was advised, that it would do him no good to oppose the British, but that he might possibly reap considerable benefit from their assist-

ance. Mercha Warké candidly said, that the Abyssinians knew they could not oppose the English successfully; but had it been the Turks—and the man's eyes flashed with bitter hatred on alluding to the Moslem—his countrymen would beat them again as they had done before. Mercha Warké delivered to Colonel Merewether Prince Kâsa's letter to the British Commander. This letter was to the effect that he, Dejjâj Kâsa, had recovered the throne of his ancestors, who were friends of the English from Consul Salt's time down to that of Consul Plowden; that he expected to have had a letter from the English Commander, but not having received any communication, he had taken the initiative, and sent a letter himself. He added: "I know not what you have come for. If I knew it would please me." And again, "I am sending my heart"—*i.e.* his real sentiments—"and you are to send me your heart." It was soon discovered that there were two factions at Adowa, the one advising Kâsa to court the friendship of the English, the other trying to persuade him to oppose the invaders and drive them out of the country. Kâsa wisely followed the advice of the peaceful party.

At sunset at Rahaguddé it became very cold, and while we were smoking over a brilliant fire after dinner, we heard a chant in the distance, a native war-song, and presently a dozen of our old friends

the faithful Shoho chiefs made their appearance in line, all fully armed. They halted about ten yards off, singing a wild monotonous chant, keeping time with their feet. Suddenly one of the number sprang forward from the rank and bounded close up to Colonel Merewether, holding out his shield, and causing his spear to vibrate as if about to run him through the body, shouting out at the same time some unintelligible words of defiance. It was perhaps fortunate, either for the Shoho chiefs or ourselves, that we had all considerable acquaintance with semi-savage and barbarous natives, for otherwise such an exhibition, made suddenly and without warning, might easily have been regarded as the real thing in place of a mockery. The Shohos put on their fiercest aspect, and one after another sprang with warlike and threatening gesture to our feet, spitting their imaginary foes, and decapitating whole imperceptible ranks with their swords. The real meaning of the entertainment was, that they had all fed well at the expense of the British, and in their rude way wished to express that each, one and all, desired to be regarded as the champions of the English Commander. Having for a time worked themselves into a high pitch of bodily excitement, never for a moment omitting to mark the time of their ceaseless chant, they suddenly collapsed for want of breath. They then retired, leaving behind

them the impression, that such an exhibition in the Egyptian Hall, Piccadilly, would produce a wonderful sensation, particularly if many elderly females were present among the audience.

Although some distance below the highlands, this night of the 4th December was one of the coldest experienced during the campaign. The temperature fell to 29° Fahrenheit.

Those of the advance brigade who could not retain the warmth of their bodies by turning in, as Jack says, all standing, amused themselves by toasting first one side and then the other at the camp-fires.

The next day Major Pierce, with a company of the 10th B.N.I. and Newport's Sappers, marched up the ravine to a water-pool, for the purpose of sloping off some bad pieces of ground for the free passage of the baggage-mules of the brigade. The following morning, the 6th December, the vision of the shivering Multum-in-parvo, with hot coffee, warned my companion and myself that the time had arrived to carry out the previous evening's arrangements. Accordingly, at 4 A.M., Colonel Phayre and I started off on foot in the dark to make the best of our way up the ravine to join Major Pierce, who was encamped four miles up the pass. The Komaylé valley, which had now been followed for forty-five miles, here came to a termination as respects its

practicability for a route; for the mountains closed in, and the torrent-bed, contracted to the width of a few feet, came down a precipitous ravine from the highlands 700 feet above our heads. The mountains, beautifully clothed with a thick jungle of fine trees, though presenting a bold aspect by their steep faces running down into two ravines which joined at the spot we had now reached, did not present anything like the formidable appearance of the Maderto ghaut, being less precipitous and only half the height. There was plenty of work cut out for the advanced guard of pioneers, Newport's company of Sappers, and Major Pierce's men of the 10th N.I., in clearing a path through the jungle, filling up holes, and ramping down the sides of mountain water-channels. All this was absolutely necessary to be done before the advance brigade, with its baggage, could proceed. The morning was cold, and the highlands at last within reach. The sepoys therefore set to work, with such a will and determination to clear away all obstructions to the advance, that rapid progress was made in the mile and a half of jungle clearance up the steep acclivity; and at 11 A.M. the working parties issued from the ravine on to the table-land above. Resting from our labours, we all sat down on the rocks watching the arrival of the advance brigade as it surmounted the steep and newly-cleared ghaut; and at noon the whole advanced force, with

all their mules and baggage, stood on the table-land of Abyssinia.

The troops now rested for an hour, during which time we got some breakfast in the shade of the rocks, and the local chiefs from Senâfé made their appearance and paid their respects to Colonel Merewether. The village of Senâfé, a mile and a half distant from the edge of the table-land, and not in view, is inhabited by Mohammedans, not Abyssinians. Mohammad and the other Shoho chiefs, our guides, being for once in good company, fraternized with their co-religionists. But the brother of the Nâyib of Harkîko, however, who had accompanied us from the coast, held aloof. Looking down from a rocky perch upon the poorly-clad visitors, he puffed away at a cheroot with an air of supreme contempt at what he considered their barbarous country and appearance, compared to his home experience of Massowah, and its more civilized merchants.

The troops now fell in, and Colonel Merewether and his companions, and Colonel Field and his advance brigade, with band playing and colours flying, marched into the valley of Senâfé, and took up a position on a rocky slope covering the source of the water-supply, not far from the native village. Thus on the 6th December, two months after the arrival of the Reconnoitring Force in Annesley

Bay, the advance brigade of the British expedition occupied, on the table-land of Abyssinia, the head of an unknown, but now practicable, fair-weather route from the sea-coast. But this was only accomplished owing to the extreme necessity of the case, and not because the force was prepared for further advance. Such was the condition of the Transport Train at this time, that it was quite unequal to the formation of a depôt of provisions and forage for the requirements of the advance brigade; and the position on the highlands would have been untenable, but for the supplies obtained from the friendly population on the spot. Irrespective of the defection of the muleteers, a terrible epidemic was rendering nugatory all the efforts of the Transport Train officers; for the best cared-for mules suffered almost equally with the neglected ones from that dreadful scourge. Had the Train been even in a perfect state when the epidemic set in, it could not have contended with the disease so as to have remained efficient. Fortunately the advance brigade became in a great measure self-supporting, the markets near Senâfé furnishing grain, while meat and forage were obtained on the spot. The political advantages of the step were soon made apparent, and shortly after Sir Robert Napier's arrival in the country its wisdom received the final impress of his approval.

Colonel Graves and his fine regiment, the 3rd Bombay Cavalry, marched into camp the next day. There can be little doubt that their advance to the highlands at this time was the means of saving those officers' and troop horses that had not already succumbed to the disease of the lowlands. That ninety-nine horses out of a hundred will die in the lowlands, and one in a hundred in Abyssinia, was the saying of the natives at Senâfé with reference to this complaint.

Mercha Warké remained another day in camp; and although he expressed the good-will of Kâsa, and the natives appeared friendly, every precaution was taken to secure the British camp from a sudden surprise.

No time was lost in setting the Sappers to work to improve the ghaut trace; and in the hopes of getting a better line than that near the native track recently improved and opened out, two days were given up to the examination of the neighbouring ravines; but they all required more labour than the old indifferent line, or more than could be spared for the work. On the 10th our party, with several friends from the camp, visited, for the purpose of taking observations, the mountain of Suera, the loftiest in Northern Abyssinia, and situated about five miles from Senâfé. Fortunately most of us took the precaution of carrying fire-arms; for Major Pierce

and I being at one time separated from the rest of the party by a wide ravine, three ill-looking natives suddenly appeared on the scene, and seeing Major Pierce alone, and apparently unarmed, advanced towards him with threatening gestures and in an excited manner. The Major stood his ground, and although without a gun was not unarmed. He was in the act of drawing out his revolver, when our swarthy friends for the first time observed the Major's companion with a double-barrel gun quite prepared for them, a rock having till then screened him from their view. The spears and shields fell at once naturally into their usual resting-places, and the cognate brothers of the Galata jungle robbers slunk away considerably crest-fallen.

The officers of the Trigonometrical Survey give the heights of Mount Suera and the Senâfé camp as respectively 9,550 and 7,690 feet; Dr. Martin and the writer measured the elevation of these places at 8,950 and 7,465 feet respectively, by the means of the boiling-point of the thermometer, which requires great care in the manipulation. The discrepancy between the measurements is to be accounted for in the case of the mountain by different points having been measured. Suera is not simply a peak, but an elevated margin of considerable length near the edge of the high land. It was rather doubtful, at the time of our visit, whether or not we had attained to the

highest point of the so-called Mount Suera. Our measurement of Senâfé was taken at rather a low point, where the original camp was pitched. The difference in the measurements of Senâfé may therefore be taken not to exceed 200 feet: not a very great discrepancy, considering that the method employed, after all, is not infallible, though probably the most accurate plan of determining heights short of trigonometrical observations with the theodolite. Indeed all the ordinary systems used by travellers produce very rough approximations to the truth, the aneroid barometer giving the most inaccurate results over 4,000 feet. There is one satisfactory point about the aneroid, however, and that is, that instruments by different makers never agree, which furnishes a fund of argument to rival observers.

As it was impossible to foretell the probable duration of the campaign, it was considered advisable not entirely to neglect the Hadâs valley route because a better one had been obtained. It was evident that, although the Komaylé valley route could be converted into by far the best fair-weather road, yet it was not so certain, if the campaign came to be prolonged over the rainy season, that it would hold its place as the best monsoon or wet-weather road. It was not at all unlikely that the Sooroo Pass might prove untenable, and an effectual barrier to all traffic during the rains, when the smaller

Hadâs ravine might be open. It became necessary, therefore, to connect Senâfé with the King's Camp at Tekoonda, which we had visited on our last reconnoissance. Accordingly, on the 14th December, our Reconnoitring Party made the exploration, the distance being nearly ten miles, returning to Senâfé the same day. Dr. Krapf accompanied our party on this trip, which must have been most interesting to him, for he had travelled over the same route in 1842, but under sadly different auspices. Then, after passing through numerous perils while travelling from Shoa, and having been robbed and ill-treated by a rascally chief near Magdala, he had reached Senâfé as a fugitive, without means and unprotected, and in this helpless condition had been compelled to satisfy the rapaciousness of the Mohammedan chief of Senâfé, by the gift of a part of his apparel. The Chief of Tekoonda had, on the contrary, shown the worthy missionary some kindness. He induced a Shoho to guide Dr. Krapf to the coast, to be paid on his arrival there, the traveller being without money. Now the Doctor bestrode a fine mule, and, surrounded by officers with their escort of cavalry, his approach to Tekoonda in 1867 was a vastly different affair from that journey made by him twenty-five years previously.

The route from Senâfé to Tekoonda led north-

wards across the valley, and then ascended to the shoulder of a lofty mountain by name Arab-Teriki,* of the same elevation as the mountain Tsaro. The ascent from the Senâfé plain took us an hour to climb, and with the scarped peak still high above our heads on the left hand, we commenced the descent on the other side. From this point the whole country in the N.N.W. direction we were proceeding was covered with a thick jungle, chiefly of the graceful juniper-tree. Our route, which followed the crest of the watershed of the highland, in some places very narrow, led us up and down a succession of passes of such a character as necessitated the whole party's proceeding on foot. It was in this jungle, three months later, that an unfortunate Hindoo of the Army Works Corps was killed and devoured by a lion. Deep ravines, on our right hand, ran down towards the Ḳomaylé torrent in the direction of the Red Sea, while on our left, to the west, the smaller valleys sloped off towards an enormous gorge in the table-land which drains into the river Mareb. The head of this wonderful gorge, which has been scooped out of the highland by the scouring action of water through long ages, terminated in an abrupt horse-shoe-like scarp, within a yard of our path; or, it should rather be said, the path led round the head of the gorge; and from this point we obtained

* 9,050 feet, Trigonometrical Survey.

a very grand and extensive view of perhaps one of the finest eroded valleys of the highlands trending to the west, to the Nile. Here was food for the inquiring mind of the geologist, and data for the calculation of the engineer. This excavation or gorge of Hamez, three or four miles in width, and having an extreme depth of probably not less than a mile, presented a work of nature's engineering, in comparison with which the great excavations and earthworks of the modern engineer must be regarded as puny and insignificant. What a potent machine is that same running water! At the time of our visit the valley was dry; the excavator was at rest, and would not resume his labours for the next four or five months. But powerful as is the force of water in motion, as this agent of destruction is only at work in Abyssinia for about a third of each year, the astonishing results above mentioned are, of course, the product of an immensely long period of time.

The operations of nature above described, like the conversion of angular rocks into rounded boulders in the dry water-courses of Aden, and like the deep cuttings in the Sooroo and Ragoolé defiles, must be set down to that geological scapegoat the "lapse of ages," otherwise called a "geological period;" which may mean any time from, say, 4,000 years to more years than it would be easy to express even in figures.

Our party had certainly traversed a rough country in the Tekoonda reconnoissance up the Hadâs; the Maderto ghaut was unique for steepness, and portions of the route near Illeleia were very bad indeed; but for unevenness, the greater part of the first eight miles from Senâfé to Tekoonda, equalled in roughness anything we had before encountered. The route comprised a very complete set of Abyssinian staircases, sometimes ascending, as often descending; but always steep, and varying from 200 to 450 feet in height or depth. The traffic of men and cattle for ages had scored out deeply the soil surrounding the disjointed rocks in our track, which stood up bare and foot-worn in high steps and ridges. We now passed on by the head of the Hamez gorge, which place, our guides pointed out, bore a very ill repute among their respectable selves. The jungle in the neighbourhood, they said, was frequented by robbers and cut-throats, who, in all probability, were at that very moment on the look-out for unwary travellers. The country became more open as we approached Tekoonda, which was perched up on the spur of a hill overlooking the King's Camp. The camp, about a mile distant, had not the same green and inviting appearance as when we had visited it on the 16th November. It had a poor and deserted aspect in comparison with the large open grassy

valleys of Senâfé. The crops were said to have been destroyed by locusts, but we did not see any of these devouring insects at Tekoonda.

We were civilly received at Tekoonda, one of the chiefs or elders inviting us to his house, or rather hut, which was surrounded by a palisaded enclosure. As the hut seemed quite common to animals as well as men, we preferred taking up a position in the outer court. Here we partook of our own fare in contentment, after an ineffectual attempt to swallow some *tej*, the home-brew of the village. Water was brought for all our horses, and those of the cavalry escort—a civility which was appreciated, the watering-place being so far off. It must be a great drawback to the inhabitants of the village having to go such a distance for water; but the peaceable natives wisely abstain from living too near to the resort, common to travellers as well as themselves. After resting awhile, we retraced our steps to Senâfé.

On the 19th December Mercha Warké again made his appearance in the British Camp. He brought from Adowa two letters from Prince Kâsa, addressed to Colonel Merewether. This time the Prince acknowledged the Commander-in-Chief's proclamation. Mercha must have reported well of his reception by Colonel Merewether, and of his complete faith in the intentions of the British as set

forth so clearly in the proclamation. Prince Kâsa's letters were most satisfactory, particularly the sentence "I give over to you the grass, the wood, and the water." The "peace" party were evidently "in" at Adowa, and the "war" party in opposition.

The Reconnoitring Party were now fully occupied at Senâfé. Colonel Merewether was engaged in entering into friendly relationship with the people of the country; in receiving the numerous chiefs and elders of the surrounding population, who came into the British Camp to pay their respects to the Commander; and in making agreements for the conveyance and delivery of grain, &c. Under his guidance, and ably assisted by Doctor Krapf and M. Munzinger, who acted as advisers and interpreters, the British character for fair dealing soon became disseminated throughout the neighbourhood. This conduct on the part of the foreigners, so unlike the military system usually followed by the rulers of the country, speedily bore fruit, and the natives exerted themselves to provide for the requirements of the British Camp. Colonel Phayre explored the numerous valleys in the neighbourhood, with a view to an estimate of the amount of forage obtainable for present and future wants. He also directed all the necessary arrangements in the formation of the new camp, become Post No. 2 on the highlands; in perfecting the organization of the several posts in the

passes, and in directing the movements of troops, &c. My own attention was directed to the construction of the ghaut or pass up to the edge of the highland, on which Newport's Sappers were now busily employed, and which required a great amount of work to prepare it for wheeled traffic. This ghaut was over 700 feet in height, and entailed the construction of a mountain road of more than two miles in length.

At this time the whole of the Madras and Bombay Sappers had arrived at Zulla, and had been distributed on the works from the pier at Annesley Bay up to the foot of the Senâfé ghaut. Captain MacDonnell, R.E., commanding the Bombay Sappers, arrived at the foot of the ghaut with his head-quarters and one company on the 17th December, as also Lieutenant Jopp, who came up to take charge of the engineering work on the ghaut, to enable me to return to the coast. On the 18th and 19th the arrangements for working the ghaut were completed, and the speedy return of our party to Annesley Bay in contemplation, when Colonel Merewether, from the information he had received, found himself unable to determine upon the route to be adopted by the army on the way from Senâfé to Adigerat. Adigerat was the next place of importance, which lay on the direct route south towards the supposed, or reported, position of Magdala

Three routes were named, but the choice was supposed to lie between the two principal ones—the King's road and the caravan road. Owing to this doubt, it was considered advisable that the reconnoitring should be carried as far as Adigerat, so as to close all future deliberation as to the line to be followed by the army, as soon as the Commander-in-Chief might be able to advance from Post No. 2.

With his determination to examine both the roads above mentioned, Colonel Merewether decided to go by the King's road and to return by the caravan or kâfilah route. Accordingly our old Reconnoitring Party, accompanied by Dr. Krapf, M. Munzinger, Mercha Warké, and escorted by a strong detachment of the 3rd Cavalry under the command of Lieut.-Colonel Loch, set out at dawn on the 21st December for Adigerat, in the district of Agamé. Our route lay south across the plains of Shumazana, and in the first six miles passed seven villages, the principal one of which, Akafisé, holds a weekly market. We then crossed over a low saddle between two hills, and descended a short defile about forty feet in width, passing close to the village of Barakît. This village is finely situated on an eminence, overlooking the extensive valley of Bahât, in which the Mai Muna, which flows down to Ragoolé, rises. Crossing some low hills at the north side of the valley, and passing by a few villages picturesquely

situated, we descended into the valley and shaped our course obliquely towards its south-eastern end. This large valley, enclosed by rocky mountains, was covered with grass, and was watered by a small sluggish stream which coursed down its centre at slow speed, and mostly underground. Our route took us in front of the gorge of Baraka, which is a cleft in the rocks on the southern side of the valley. This chasm, or split in the hill-side, contains a celebrated though insignificant church dedicated to St. Romanos, a monk of the sixth century. The church is simply a cave built up in front, the interior being in a measure ornamented with a framework of wood on a model very similar to that of the Lycian tombs, with curvilinear roofs. This fact suggested all manner of archæological speculations. An inner cave contained the bones of the saint, besides those of a whole band of martyrs, described by Mr. Markham as having first been turned out to grass like Nebuchadnezzar, and having afterwards committed suicide in the cave. The old priest of the church showed us the martyrs' remains through a hole in the side of the cave, the outlines of human figures being perceptible through the cloths in which they were enshrouded. Doubtless the priestly succession keep up their stock of martyrs, for all the remains of the originals must have disappeared long ago. The scarped gorge of Baraka penetrated deeply into the

mountain, and was well watered by a copious stream which issued from the rocks. It was also well shaded by some fine sycamore-trees. This fountain of Baraka is one of the sources of the River Mai Muna. The priest produced a manuscript on parchment, bound in boards, written in the ancient Geez character. Dr. Krapf translated to us portions of this valuable work, which was found to be full of the most arrant nonsense and superstition.

Passing on from the cave of Baraka, we shortly entered a ravine bounded by steep rocks on each side. Our course up this ravine was at right angles to our former direction down the valley. A small stream—another fountain tributary of the Mai Muna—ran down the centre of the valley, and afforded the means of irrigation of which the natives had availed themselves. Our party proceeded some distance up the valley, and at the end of four hours' march, covering twelve miles from Senâfé, halted in the shade of a steep cliff for breakfast. This place, which afterwards became one of the chain of posts *en route* to Magdala, bore the name of Goona-goona. It boasted of a church of considerable antiquity, which was perched high up on the very verge of a precipice overhanging the valley. This morning's march had completed our knowledge of the principal sources of the River Muna, believed to be the chief tributary of the River Ragoolé in the

lowlands. The perennial character of the fountains of the Mai Muna satisfactorily accounted for the presence of flowing water at Ragoolé at the time of our visit to that place.

The march was resumed at noon, and we at once ascended the steep cliffs or walls enclosing the valley of Goona-goona. On emerging on to the summit of this Abyssinian ladder, we entered upon the extensive plain of Gullaba, which was covered with grass. The heat of the sun now became very oppressive. Cool as were the nights in the highlands, the thermometer registering about 40° a few feet from the ground, and the dew in shady places being usually converted into hoar frost; yet, for a few hours, about mid-day, the sun's rays penetrated the atmosphere with a power much greater than the 75° shade maximum would seem to warrant. This fact opens up scientific questions into which we have no time to dive at present, and is apparently diametrically opposed to a branch fact, always a puzzle to the ordinary public unacquainted with the effects of rarity of atmosphere—namely, that the summits of mountains, though nearer the sun, are always cooler than their bases, so much farther distant from that luminary.

Marching four miles across the Gullaba plain, we passed along the crest of the water-shed between the Red Sea and the Nile. In a deep ravine towards the

lowlands the lofty sandstone scarped hill-fort, the *amba* Debra Matso, made its first appearance. There were some curiously-shaped conical peaks in this ravine, and the Adowa hills, overhanging Prince Kâsa's capital, came out clear against the sky across a deep gorge trending towards the Nile. As it was now quite time to bring our march to a close, we turned from the direct route to descend a steep pass leading down past the village of Akran to the water of Mai Musrub, distant twenty miles from Senâfé. We encamped on the bank of this small stream, which is another feeder of the River Muna.

Following up the valley of the Mai Musrub early the next morning, we shortly ascended the steep slope of its southern face, and rejoined the route on the Gullaba plain we had left the day before. Five miles' marching brought us to the hill of Focâda, which we turned by a narrow track at its base, which wound round the head of a deep gorge very similar to that of Hamez, already described on the Tekoonda route. The needle-like peaks of Adowa towered up in the distance, while the celebrated *amba* Debra Damot rose up from the centre of the gorge, having been left intact whilst the process of erosion was slowly but surely proceeding with its work of destruction on all around it. The highlands here had the most extraordinary appearance. It was like two countries at different

levels. The table-land upon which we stood was as level as if sliced off horizontally with a knife, and a few conical peaks had subsequently protruded themselves here and there through the surface; below us again, at a depth of a thousand to two thousand feet, at the bottom of the deep gorge, was another level plain, which had also isolated hills rising out of its surface. One of these, the hill-fort of Debra Damot, already mentioned, had once formed part of the higher highland level upon which we stood. The valley had been scooped out by the action of flowing water; but the courses of the water channels had not encroached upon the original mound, now become a mountain by the scouring away of the soil at its base. Three miles further on we arrived at a point where the route passed over a narrow strip of ground of our high table-land level, only a few yards in width. This contracted causeway was all that remained intact of the highland plateau on the summit of the water-shed of the country. On both sides enormous ravines ran down from our path as from a bridge; the one towards the Nile, the other in the direction of Ragoolé and the Red Sea. From our narrow wall of highland we looked down on each side into enormous depths, with wonder that such mighty chasms could ever have been excavated by the slow natural action of water, condensed from, and deposited by, the equatorial

clouds which yearly pass northwards over the country. Shortly after we crossed a saddle between two hills, and from this point obtained bearings to the distant Senâfé rocks, to Debra Matso, the Kerbosa peak, and the gorge of Gundi-gundi, leading down to Ragoolé. Shortly afterwards the track led our party abruptly to the edge of a very steep pass, which presented the usual features of an Abyssinian natural staircase. Dismounting, we clambered over rocks to the bottom of the Khursabur ghaut, and proceeded on to the village at its foot, which, like so many others in this unhappy land, was found to be completely deserted. These forsaken villages give a mournful aspect to a country, and silently give proof of its social and political condition. The route now led across a long narrow plain at the edge of the highland. To the right, landwards, the plain was bounded by ranges of mountains; to the left, towards the sea, the valley at its edge was broken up into precipitous ravines and chasms, running down to the lowlands near the Salt Lake, 8,000 feet beneath our feet. We halted for breakfast under a large tree, a little retired from the northerly route of the country we had been travelling over. This was done to obtain shade from the mid-day sun, which burnt fiercely, and not from the Englishman's ordinary desire for seclusion, for the whole country appeared depopulated. No

busy travellers thronged the road; not a solitary wayfarer had been seen the whole way from Senâfé; and the only signs of life met with in the thirty-four miles hitherto traversed on this reconnoissance had been a few Abyssinians at the village of Akran, and half a dozen shepherds tending cattle in the distance.

Continuing the journey shortly before 3 P.M., the last spur covering the valley of Adigerat was turned; and crossing some fields from which the crops had lately been reaped, we silently took up a position near the head of the water-supply of the valley. The village was distant about half a mile over a level plain; but the same apathy observed on the part of the Shohos on our landing in their country at Zulla, was displayed by the Abyssinians of one of the principal towns in the country, on our quietly encamping in their fields at Adigerat. It is not, however, unlikely, that the appearance of the cavalry escort armed with carbines, and mounted on horses which would appear to Abyssinians of astonishing size and power, had its due effect in inducing the natives to hold aloof, until the intentions of the foreign visitors had been declared. Adigerat lies in a recess in the mountains, and is overawed by the *ambas* Undul and Aloquor, which tower over it on the west. The small camp was pitched on the open plain, a few hundred yards from the most imposing

building as yet seen in the country. This consisted of a watch-tower with a large embrasure on the top, and a high wall enclosing the usual circular thatched dwellings of the country. This little fort, as it may out of courtesy be called, was at the time of our visit inhabited by a lady, the wife of the son of the famous Sabagadis of Tigré, the most renowned ruler of the country of modern times. This poor lady was mourning the absence of her husband, who was a prisoner in the hands of the Wakshûm Gobazê. Sabagadis, who, forty years previously, had endeavoured to open up friendly relations with the English, did not live to receive the mission which was sent to him in response to his invitation. He was murdered at the instigation of Dejâjmatch Oobé, who thus paved the way to his own advancement in Tigré. Colonel Merewether offered to visit the unfortunate lady, which she, with an excess of propriety, declined; her fears at the sight of the troopers probably overcoming that feeling of curiosity which, to members of her sex, is often, so falsely, said to be irresistible. Before leaving Tigré the following year, the Commander-in-Chief interested himself with the Wakshûm Gobazê of Lasta to obtain the release of the Shûm Agamé Subhât, with what success remains unknown.

Prince Kâsa's chiefs of Adigerat were absent on our arrival, which was probably a preconcerted ar-

ADIGERAT.

rangement, although excuses as to being engaged in the collection of tribute were not wanting. Many persons warned Colonel Merewether that the Prince was not to be trusted, which kept him on the alert. The little encampment was made as compact as possible, and vigilant sentries tramped up and down on each side of the camp during the bright moonlight night. The absence of the leading men of the district was certainly ominous, but it is probable they wished to avoid compromising themselves in any way. The fair and friendly treatment of the people at Senâfé conduced to our advantage at Adigerat. A halt of one day only was made at Adigerat, for the purpose of collecting information, visiting the weekly market, and exploring the neighbouring country, including the wonderful ravine, which, severing the edge of the highland, winds down in the direction of Ragoolé.

Sir Charles Staveley having communicated his intention of visiting Senâfé, our party left Adigerat at dawn on the 24th December, with the intention of returning to Post No. 2 by the second or caravan route, and meeting Sir Charles there on Christmas day. The King's Road to Adigerat had been computed at thirty-seven miles, which we had accomplished in two days, Zulla being exactly a hundred miles distant from Adigerat. Retracing our steps up the valley, which was covered with hoar frost,

we passed within a quarter of a mile of the large tree under which we had breakfasted on the 22nd, and from this point the new route diverged in a north-easterly direction. The temperature of the early morning was delightful for travelling; but the constant Abyssinian staircases, though allied to the fine views so frequently obtained, gave an infinity of trouble to both men and animals.

After marching about seven miles, our route bearing to the edge of the highlands towards the hill-fort or *amba* Debra Matso, we arrived at the top of a declivity 440 feet in height, the very sight of which must have made the baggage-mules' hearts ache. The Khursabur ghaut descended on the 22nd was insignificant compared to this rocky ladder. It appeared very like the descent of the side of the great pyramid at Cairo, the height and slope being much about the same. In this case, however, horses and laden mules had to effect a descent—an experiment which has not been tried in Egypt. English people, who are, in 1869, as well acquainted with the topography of the burial-place of Cheops as they were with Margate lodging-houses a generation back, will now have fairly brought before them, by a simile which might fairly have been indulged in long ago, what a real Abyssinian staircase is. Still it must in justice be stated, that nothing equivalent to the Sooroo pass, when first seen, is to be found in Egypt.

At the bottom of this deep pass, near the *amba* Debra Matso, we found ourselves in a pleasant ravine, with soft green turf under foot, well shaded by large trees, and watered by a subterranean stream which occasionally burst forth through the surface. This valley was cultivated at the bottom, which was tolerably level for about 150 yards in width; but unfortunately, like the valley of Adigerat, was infested with myriads of locusts. The plague of locusts had been first seen at Adigerat. The natives said they had been in the country five years, and would remain three more before they disappeared. In Western India, where this plague has lately made its appearance, it is said, that it is a recurring phenomenon every twelve years, that the insects breed and remain in the country for a few years, and then pass on eastwards.

At one place in the valley the people had lighted fires all about their fields; and women and children, by flapping large cloths, endeavoured to drive the locusts away. Their efforts must have been attended with very small success, for the air was swarming with the winged insects; and the ground was so covered with them, that our horses crushed numbers at each step. Apparently unable to regulate their flight, we were literally pelted with them; but the creatures are in no way disgusting, though an intolerable nuisance. As locusts

devour the produce of the land, the natives retaliate by eating them. They are first roasted, then pounded, and lastly mixed with honey and devoured.

This valley takes its name from the *amba* Umbaito which overhangs it. The imposing light-coloured scarped capping of the natural fort induced a rather uncomfortable feeling in the hearts of the invaders below, who were conscious of their exposed and untenable position as they wound down the ravine. The guardian of the valley, which has villages on its lower slopes, was assisted in its duty of protection, and in watching its still more powerful neighbour the *amba* Debra Matso, by a deputy across the ravine, the *amba* Serano. Feeling anything but conquerors as we slunk down the bottom of this fort ditch for about six miles, we left one Abyssinian trap only to fall into another at the foot of the still more formidable Debra Matso. The light-grey sandstone capping of all the loftier mountains of northern Abyssinia deserves passing notice. This stratum is of no great depth, and having a horizontal cleavage invites geological speculation. That the sandstone has been deposited below water may be fairly assumed, if not proved; but how it has retained the level of its formation at 9,000 feet above the sea is another matter altogether. The rocks supporting the sandstone have been terribly distorted by igneous action. The slaty rocks next

the sandstone, though stratified, have their strata tilted up at a high angle. It would appear, therefore, that the Abyssinian table-land had been elevated to its present position by volcanic action after the igneous action which took place below water had ceased, and the sandstone deposit had been formed. This latest formation, then, had occurred in the interval between the igneous action and the final upheaval of the land.

The sandstone covering of Mounts Suera, Tsaro, Assuat, also of the *ambas* Debra Damot, Debra Deria, Debra Matso, and hundreds of other peaks, does not seem to have any connection with the sandstone of the Senâfé rocks, of the Goona-goona gorge, and of many other places of the same altitude. While the first mentioned is a cold pale blue-grey, the lower sandstone is of a red colour, and differs considerably in texture. In the geological section a difference of about 500 feet would seem to intervene between the bottom of the light-coloured sandstone and the top of the red sandstone.

After passing by a large pool of water in the naturally formed ditch of Debra Matso, our party halted to fortify themselves inwardly with Francis the Ready's good fare. Francis, whose last appearance in these pages was on the plain of Râsa at Howâkil Bay, had, on achieving the summit of the highland pass the day that Senâfé was occupied,

created considerable astonishment in the minds of the Senâféotes as his camel reared its head over their mops. Strange to say, there were not many of the highland people of these parts that had ever seen the animal before; all the northern passes being too rough to admit of their employment. The surprise of the people on this occasion was, however, small compared to that produced when Sir Robert Napier's elephants appeared in the country. But the Shohos at Zulla alone came in for all the wonders. The civilization of the nineteenth century, and its sciences, were thrown suddenly upon a people of a lower stage of mental development than the ancient Briton, who was accustomed to appear abroad in woad-coloured human skins :—

> "A painted vest Prince Vortigern had on,
> Which from a naked Pict his grandsire won ;"

and who received distinguished foreigners as they landed in the country, not with addresses and banquets, but with a crack on the head with a club. The fact, that the Shoho is only a few degrees in advance of his neighbour the cynocephalus baboon, alone saved him from becoming a raving maniac, when the elephant walked in his midst, the sea was turned into a fresh-water river, and the Fire-Devil ran away with the train!

Quitting the ravine of Umbaito, which had now become the ditch of the fort of Debra Matso, we

crossed the stream Mai Musrub, at the head of which we had encamped on the 21st, and commenced the ascent of some very steep hills. In fact the guides wished to take us to our destination by a short cut over the mountains, instead of by the longer road down the ravine to its junction with that of the Mai Muna. And what a short cut! For two hours our party floundered through tangled jungle, over a disconnected cattle-track simply scratched in the side of a steep mountain. Explorers, who generally select for their examinations and researches the worst country they can find, do not often come across a country so absurdly inconvenient as this was. The normal position of the traveller in Abyssinia, when resorting to short cuts, may be thus described:—He is passing along a narrow ledge much broken up, a cliff above, a precipice below, the branches of trees encumbering the path. His horse has his near fore-foot on a loose round stone, with the off fore-foot pawing the air in the vain attempt to reach another two or three feet below him. A hind foot is caught in the rock above, while the animal's tail is fast in a bush. The rider covers his face with one arm, and at the same time fixes his glance on a branch which must catch him under the chin. His helmet is held by an acacia fish-hook, while its strap is fast producing strangulation. His right hand grasps his gun lying across his knees,

and the reins are entangled with the triggers and cock. Smoking of course, he smells burnt moustache, while cigar-ash flies in his eyes, and a crag crunches his boot. From this dead-lock he is at last relieved by a sharp thorn running into his leg, which, by causing that member to shrink, passes on the effect through the spur to his horse. This results in a decisive struggle, which lands the traveller on his back on the wrong side of the impediment he wishes to overcome, breaks his only pipe, flattens his flask; discharges his gun, fractures the stock, sends one bullet through the hat of his nearest friend, while the other penetrates the ribs of his own baggage-mule in the rear, and crashing through his liquor-case on the one side, lodges in his canteen on the other. Such are the delights of Abyssinian travelling, and six miles of difficulties and dangers, aggregating something not very unlike the above description, delivered our party on the banks of the Mai Muna at Afoo-Hâka, some nineteen miles from Adigerat. The rear-guard did not get in till after dark, having been fourteen hours on the march, and then it came by the easier road round by the valley.

At the earliest dawn on Christmas-day, 1867, our Reconnoitring Party wound up the valley of the Mai Muna from the encampment at Afoo-Haka, where the stream, fed by the fountains of the valley

of Bahât and its tributary ravines, had attained a width of some yards. The track by the side of the stream was very rugged, for the hills on each side threw forward a multitude of spurs to the very edge of the water. To avoid the worst of these the route crossed the stream several times, and followed whichever bank appeared the least impracticable. As our party emerged from the contracted and rocky defile into our old and capacious valley of Baraka and Bahât, we passed by a native fortified post, the *amba* Haggeda, well placed at the head of the pass. What a relief it was to escape from the narrow and sunken route, the so-called kâfilah or caravan road, into the open valleys of Shumazana. The Goona-goona ravine and the Baraka gorge, containing the bones of the graminivorous martyrs, were shortly turned; and halfway up this large valley, at the village of Barakît, we joined our old route, the King's road from Senâfé. The road now ascended through a short defile to the upper Shumazana valley. Here, in this distant corner of Tigré, the inhabitants seemed always more peaceful and occupied in agricultural pursuits than those met with in the cut-throat valleys of Goona-goona, the Mai Muna, and Debra Matso. As usual in the fields in the Senâfé valley, a number of the poorer natives, chiefly women and children, were digging in search of esculent roots; for while the mountain

and lowland tribes of Shohos and Danâkil subsist on meat and milk, the highlanders live principally upon grain, roots, and milk, with occasionally, not from choice but from necessity, a mess of "locusts and wild honey."

The return journey by the caravan road was found to be two or three miles shorter than by the upper or water-shed route by Goona-goona, Focâda, and Khursabur; but while the latter was practicable for the baggage animals of the army, excepting at the two passes of Goona-goona and Khursabur, which could be made so by the Sappers, the lower route was quite unfit for our purposes. For a length of sixteen miles the caravan track crossed ground exceedingly rough, or wound through deep ditch-like ravines, commanded at every point by native forts, and running the gauntlet of a series of Shoho villages perched high up on the shoulders of the several *ambas*.

That this well-guarded and overawed route is followed by the very few caravans which find their way into these regions from the interior or from the sea, is due to the power of the Shoho tribes. These freebooters insist on the caravans, such as they are, —for a few merchants and convoy of bullocks can scarcely deserve the grand-sounding term,—following the route of their selection, which, as may readily be understood from the description given,

enables the short-sighted extortioners to levy with perfect ease to themselves their customary black-mail.

The rear-guard of the cavalry escort brought into camp a number of Shoho prisoners, accused by some muleteers of the party of having descended upon them and their mules, when they had strayed a short way from the rest of the string. The Shohos, the mule-drivers averred, had carried them and their animals up to a village; and, in a manner most unpleasant to their feelings, had made signs of cutting their throats. At this exciting moment, their last as the Hindoos verily believed, the troopers made their appearance, and delivered them from the clutches of the supposed bandits. The cavalry Jemadar explained, that as they were marching in the rear of the baggage, a muleteer had run back calling upon them in an excited manner for assistance, as the Shohos were about to slit the throats of some of their companions. The guard immediately galloped forward, released the Hindoos, and seized on all the Shohos they could catch, including some apparently innocent chiefs travelling up the valley. The Jemadar naïvely remarked, that he had no orders, otherwise he would have cut up the miscreants.

Here was a fine occasion for "le Consool," who was immediately retained by the friends of the prisoners to take in hand their defence. The

prosecutors, prisoners, guard, witnesses, and counsel, drew up in a circle round the spears and shields of the accused, collected in a heap in the centre. M. Munzinger speedily mastering the merits of his brief, boldly and with flashing eyes, excited by his sense of justice,—which was ever keen, no matter the colour or creed of the client,—stepped forward in open court on the sward of Senâfé to plead before Chief-Justice Merewether. At the termination of the evidence of the prosecutors, supplemented by that of the Jemadar, who concluded his report with the observation that he regretted he had not been permitted to annihilate the whole band, "le Consool" eloquently opened his case for the defence. His forensic display was to the following effect, though not couched in the exact words given :—

"The Shohos, these poor peaceful men"—turning round with extended arm towards the group of visages which would have collectively done honour to the prisoners' bar of the Old Bailey,—" have been entirely misunderstood by the miserable Hindoos, and been shamefully treated by those powerful troopers. Instead of deserving punishment, they merit reward. Like the Samaritan, ever on the look-out to perform a good action, they had observed with painful feelings that beneath their peaceful village a few poor mules

were staggering under heavy burdens, with their attendants, footsore and weary, toiling beside them. Their pity was at once excited for the poor strangers, who were unarmed and apparently unguarded. Fearful that the poor fellows might come to grief at the hands of robbers, sometimes met with in those parts, the Shohos had rushed down upon the ill-defended wayfarers; and seizing upon both men and mules, had hastily dragged them up to their quiet village and home. An animated conversation had then ensued between the two parties, which was accompanied by a misfortune not to be lost sight of; namely, that neither side comprehended one single word spoken by the other. The representatives of the two nations, then, being at cross purposes, the Shohos, so much more intelligent than the Hindoos, began, like other civilized nations, to talk to their unintelligible, otherwise dumb, friends on their fingers. They drew their fingers, as stated by the muleteers, across their throats with accompanying gestures full of meaning. These signs being interpreted meant to signify :—'The day had passed by, the night was at hand. Highwaymen were on the road like lions seeking whom they might devour, and should the muleteers fall into the clutches of these lawless robbers, their goods would be stolen and their blood spilt. For these reasons the only chance of safety was to be found in their village, which the

Shohos humbly placed for the night at the disposal of their visitors. In the morning they might resume their journey in safety.' At this moment, the troopers, summoned by a craven Hindoo, had galloped up to the scene; and stupidly considering that actions were better than unknown words, at once proceeded to make the whole party of natives prisoners. Not even satisfied with this injustice, a few extra captures of men of note were made afterwards on the road; and peaceable men had been kept away from their homes all night."

This was a telling speech; the argument was ingenious, and possibly sound. As the muleteers had not been able to prove that anything had been stolen, nor had any throats actually been cut; and as the only reply open to the prosecution was based on the ill-repute of the valley, the verdict was given in favour of the accused. They were at once liberated, and joyfully picking up their arms, departed for their happy valley.

The Adigerat reconnoissance had been speedily accomplished, as the Reconnoitring Party were very desirous of getting back quickly to Senâfé to meet Major-General Sir Charles Staveley, second in command of the Expedition. Sir Charles Staveley, who had brought with him the order of the Commander-in-Chief for the dissolution of the Reconnoitring Committee, had been so fully occupied at

Zulla with the arrival of a brigade of the army and the organization of the Transport Train, that he had not been able to visit Senâfé and the passes, or to hold personal communication with the officers of the Reconnoitring Committee and Advanced brigade until this time. He received all the information obtained by the Reconnoitring Party, and that which he required before issuing orders for the distribution of the Beloochees in working parties in the passes. As early as the 8th December, the Quartermaster-General had brought prominently to the notice of the several commanding officers in the passes the necessity of their doing all in their power to have the dead horses and mules near their posts burnt; and he endeavoured, through M. Munzinger, to entertain parties of Shohos, for the purpose of burning the carcases of all animals succumbing on the line of march between the several posts. Sir Charles Staveley, who, from the day he landed at Zulla, had taken a comprehensive view of the affairs of all departments, and who had assumed a general control, which resulted with such advantage to the interests of the expedition at this important juncture, had, during his journey to the highlands, become fully alive to the necessity of having a cleared road up the pass; and also, of the danger to health likely to arise from the decomposition of the bodies of so many animals as daily fell to die in the narrow defiles.

He at once appointed Staff Surgeon Lalor, Sanitary Officer for the passes; and this officer was provided with a gang of dhooly-bearers for the purpose of collecting wood and burning the carcases. He did not hesitate to order the troops, both European and Native, to engage, not only in the duties of muleteers, but also in the work of ordinary labourers, in clearing and levelling the highland road.

The political news obtained at this time was varied and conflicting. At Adigerat, Colonel Merewether was informed that Prince Menelek of Shoa had attacked Magdala, but had been driven back by the fire of the guns of the fortress. Also, that Wakshûm Gobazê had captured Magdala; and other equally unreliable reports. On returning to Senâfé, a servant of Mr. Flad was found to have arrived in the camp. He stated that Theodorus had made a rapid march to Magdala, had destroyed the fortress, and carried away with him all the captives. This story was doubted; but on M. Munzinger recognizing the man as having formerly proved himself trustworthy, a temporary belief was given to his account. The man's story was now tested in detail, when its untruth soon became apparent. Colonel Merewether believed the Abyssinian to be a spy from the King's camp; and that the story, after a common custom of the country, had been invented *en route.*

The arrangements entered into with the natives, for bringing up stores by native carriage, were now beginning to work. 916 bullocks with loads arrived at Senâfé by the 24th December, and many more were on their way by both the Komaylé and Hadâs Passes.

Sir Charles Staveley then departed for the coast; and the Reconnoitring Committee, having brought to a completion their work of exploration, commenced on the 1st October, broke up this same Christmas Day, 1867.

CHAPTER IX.

RETURN TO THE COAST.—ARRIVAL OF SIR ROBERT NAPIER.

Reconnoitring Field Force—Duties of the Reconnoitring Committee —Saddle Survey—Socialities—Colonel Merewether's Farewell Memorandum—Progress of the Road in the Passes—Success of the Maiyen Well—Baboons—Sooroo Pass Road—Sapper killed—Beloochees at work in the Passes—Lieutenant Beke and Marine Battalion—Madras Sappers at Komaylé—10th Company Royal Engineers—State of Affairs in the Passes—Zulla a busy Port—Transport Train—Piers—Sheds—Madras Sappers — Railway — Troops employed in its Construction —Captain Edye, R.N.—Water Supply—Officers of the Reconnoitring Field Force fall into their Assigned Positions—Captain Pottinger attempts to explore the Valley of the Mai Muna—The Natives stop his Proceedings—Sir Robert Napier orders the clearance of the Alternative Route — Captain Chalmers and Lieut. Hartshorne commence from Hadôda—Captain Hills from Senâfé—Captain Chalmers' Party struck down with Malignant Fever—Only authentic case of a Lion—Zulla Post-office —Jébel Tair—Economy evinced by the Bombay Government—Railway—Engineer Department overweighted by a Broad Gauge —Modification of Opinion—Army Works Corps—Shôhos as Workmen—Usefulness of the Railway—Project for a Railway for Military Purposes—Details of Plant and Rolling Stock to be used —Agency to be employed—Arrival of Sir Robert Napier—He assumes Command—His General Orders—Prestige.

On the return of the Reconnoitring Committee to the coast, which took place immediately after the

termination of the Adigerat reconnoissance, ninety-two days had passed since the Reconnoitring Field Force had made its appearance on the Abyssinian coast at Massowah, and eighty-eight days had elapsed since the debarkation of the force at Zulla. Of these eighty-eight days, the officers of the Reconnoitring Committee had passed thirty-two at Zulla, and had been absent exploring the country fifty-six days. The Committee had been actually on the march forty-nine days, and in that time had travelled over upwards of six hundred miles of an unexceptionally rough country. It may not be considered out of place here to notice the nature of the duties which devolved upon the individual members of the Reconnoitring Committee, which was ordered and projected by the Commander-in-Chief of the Expedition. Colonel Merewether Commanding and President of the Committee, directed the reconnoissances; he collected all the political and other necessary information, and inaugurated the friendly relationship with the Abyssinian Chiefs opposing Theodorus which was to fructify so greatly to the advantage of the expedition on the arrival of the Commander-in-Chief. Colonel Merewether, who, from his position as Resident at Aden was of course well known in the Red Sea and in Egypt, also held diplomatic intercourse, as commander of the Pioneering Expedition, with the Egyptian Governor-General of the

Soudan, and other local authorities on the Egyptian coast. He also, early in December, entered into contracts with the natives for the conveyance up to Senâfé, on their own cattle, of the British stores. The fair treatment the Shohos experienced at the hands of the invaders had, by this time, induced them to cast off their original and natural fear of the foreign soldiery. In his intercourse with the natives Colonel Merewether received most able assistance from the acting British Consul, M. Munzinger. Colonel Phayre caused route surveys to be made of all the country travelled over; he determined the positions for the different encampments with reference to local topography and water supply, and prepared elaborate reconnoissance reports for the information of the Commander-in-Chief. The two medical officers, who relieved each other in reconnoitring duties, conducted meteorological observations, and drew up departmental reports on sanitary and other cognate matters. My own attention was concentrated upon points connected with military defence, and a consideration of the relative importance of the physical obstacles with which the engineer has to contend; bearing in mind the value of time and available means. To assist the memory, and supplement the note-book, I occupied myself during the march in taking observations, and keeping a field-book necessary for the compilation of the

sketch survey-map—now attached to this volume—of all the country travelled over by the Reconnoitring Committee. This sketch survey may be termed a "Saddle survey," as it was made from the saddle, without halting, and at the same rate as that at which the reconnoissances were conducted. During the seven weeks' reconnoissances, only three halts of one day each were made, and those for the purpose of local mountain exploration. The mules and muleteers brought with the Reconnoitring Force from Bombay performed their work admirably; for, with the exception of two or three animals which succumbed to the trying march to Ragoolé, the remainder kept in good condition until the epidemic set in. This fatal disease attacked good and bad mules alike, and carried off many of our old friends.

Nothing tends to develop individual character more than travelling, especially if it be attended with difficulties; but no circumstances occurred to interrupt the harmony of the Reconnoitring Party, which acted unanimously throughout. Subsequently, when Doctor Krapf and Doctor Austin joined Colonel Merewether's extempore mess, the social gatherings were productive of very pleasant intercourse amongst the representatives of professions not often brought together in so fortunate a conjunction. This was now at an

end, and Colonel Merewether issued the following memorandum :—

"The Reconnoitring Committee, assembled by order of his Excellency Lieutenant-General Sir Robert Napier, G.C.S.I. and K.C.B., Commander-in-Chief, was dissolved by the following General Order, dated 6th December, 1867 :—

"'Sir Charles Staveley will be so good as to dissolve the Committee of which Colonel Merewether, C.B., is president, and to convey to Colonel Merewether, to the Quartermaster-General of the Army, Lieutenant-Colonel Phayre, and to Lieutenant-Colonel Wilkins, Royal Engineers, and the other officers of the Committee, Sir R. Napier's best thanks, and his Excellency's full appreciation of their zealous and indefatigable labours, the results of which have been generally so satisfactory.'

"The above General Order applies to Lieutenant-Colonels Phayre and Wilkins, Major Mignion, Surgeon Lumsdaine, and Lieutenant Hewett, I. N., who formed the Committee; but Colonel Merewether would beg to offer to Major Baigrie and Captain Pottinger, Quartermaster-General's department, to Captain Goodfellow, and Lieutenant Jopp, R.E., to Staff Assistant-Surgeon Martin, who accompanied the reconnoitring parties on several occasions, and carefully collected much valuable information, and to Mr. E. Dawes, Harbour-Master, his warmest thanks for the valuable assistance they have rendered to him throughout since the first landing of the Reconnoitring Party; especially to Major Baigrie, for the manner in which he managed, with very limited means, the arrangements for the camp, and landing of troops, stores, &c., when left in charge of Mulkuttoo, and to Captain Good-

fellow, for his unceasing labours, particularly on the pier made entirely under his superintendence.

"W. L. MEREWETHER, C.B., Colonel,
"Commanding Reconnoitring Party.

"*Camp Senâfé, 12th December*, 1867."

On the break-up of the exploring party at Senâfé, the members comprising it returned to the coast. By this time great progress had been made in the construction of a road for wheeled traffic in the passes. Newport's Sappers had completed the portion of the line intervening between the camp at Senâfé and a point half-way down the ghaut; and Lieutenant Jopp was lining out the lower portion preparatory to its immediate commencement. Captain MacDonnell, R.E., commanding the Bombay Sappers, with his head-quarters and Captain Leslie's company, was encamped between the foot of the Senâfé pass and Rahaguddé, clearing the road in that direction. At Rahaguddé, three companies of Beloochees, under Captain Hogg, had been posted since the second week in December, and several miles of road, from their camp towards Maiyen, had been cleared by these troops. Halting at Maiyen an opportunity was afforded us of testing the capabilities of the well which had been excavated there in the endeavour to divide the long march between Upper Sooroo and Rahaguddé. A large herd of native cattle were watered from the well in our presence;

and the same evening the horses of Captain Murray's G-14 Armstrong Battery, arriving on their way to Senâfé to escape the epidemic, the whole, together with their accompanying convoy of mules, were watered completely to the satisfaction of their officer. This was a most important success.

A curious and interesting sight was witnessed the same afternoon. A troop of about three hundred dog-faced baboons came down from the mountains and coolly sat down amongst the scattered forage in the mule lines just vacated by a convoy. They came to pick up the grain spilt from the nose-bags of the mules. The large tawny males with their long manes strode along in the most sedate manner, and finally took up their positions in the most likely spots. The females, evidently in subjection, on finding a treasure, cast hurried glances at their lords, as if afraid of being interfered with; while the young ones ran about picking up the grain here and there, till approaching too near their parents the sire's anger became aroused, and he would dart after his shrieking offspring and summarily chastise them. The baboons took no more notice of the proximity of human beings than if they had been domesticated in the Zoological Gardens in the Regent's Park. Their mode of eating exhibited, in one respect, a marked superiority over that of the other species of animal provided with hands and arms. A man

would have collected the grain and fed himself with one hand; these fellows used first one hand and then the other, and at such a rate as would have speedily left a human guest in the lurch had they been dining together out of the same dish.

The Sepoys of the 10th Bombay N. I., posted at Sooroo, had cleared the road for some distance above the defile; but in the pass itself two companies of the Bombay Sappers, commanded by Lieutenants Sturt and Leacock, were hard at work demolishing or building over the granite boulders. Great care was required and exercised by those in charge of the working parties, to prevent accidents being caused by falling rocks resulting from undue interference with the sides of the pass. Only one accident of a serious nature occurred during the three months the Sappers were making the road. One Sepoy lost his life, being crushed to death by a rock which fell out of the side of the cliff. By the end of December two-thirds of the four miles of the Sooroo Pass road were completed for wheeled traffic, and Lieutenant Leacock's company of Sappers shortly left Sooroo to march on Rahaguddé, there to engage in fresh but similar labours. Sir Charles Staveley sent a reinforcement of troops into the Komaylé Pass to assist in road-making; and Major Beville, with his head-quarters and five companies of Beloochees, entered the pass the last day of the

year. Major Beville arrived at Upper Sooroo on the 1st of January, and his men at once set to work in the most zealous manner to assist Lieutenant Sturt's company of Sappers engaged in finishing off the road near the Devil's Staircase, and in clearing and forming a road at the entrance to the defile. All the hard work was first taken in hand in the passes, the easy portions being left to the last. Besides Major Beville's Beloochees, Lieutenant Becke with his company of the Marine Battalion, part of the original escort of the Reconnoitring Party, was posted at Maiyen, and actively engaged in clearing the road both up and down the pass. Lieutenant Beke for a long time employed a gang of Shohos on his road works to assist his sepoys in performing the work allotted to them. At Komaylé Captain Elliot's K Company of Madras Sappers arrived on the 30th December, and were for some time employed on the several engineering works required at that important post, which was subsequently to become the head-quarters of the Transport Train.

The 10th Company of Royal Engineers, which arrived at Zulla in December, was divided into parties of telegraphists, signallers, well-borers, and photographers. Major Pritchard, R.E., commanded the company and directed the photographers. Lieutenants St. John and Puzey, with Morgan, whose sad death from brain-fever caused by fatigue,

occurred near Magdala, superintended the telegraph and signalling departments, and Lieutenant A. Le Messurier had charge of the well-boring and watering arrangements. All these several departments of the scientific branch were at work in the passes before the close of the year, by which time Lieutenant Le Messurier had succeeded at Komaylé in delivering water at the surface by means of his Norton's tube-wells, driven into the water-bearing stratum thirteen feet below the dry bed of the torrent. Between Komaylé and the coast a road had been cleared under the direction of Major Baigrie as early as November, the 10th Regiment of Native Infantry and the Lascars of the Quarter-master-General's department having executed the work. As regards the Transport Train and supplies, small quantities of grass only were obtained at Rahaguddé, and the Transport Train with difficulty delivered at Senâfé the provisions required by the advanced brigade at that post. Such was the condition of the road and the state of affairs in the passes at the close of the year 1867.

Zulla, from the beginning of December, had become a busy port, and at the commencement of the new year all departments of the army were working at high pressure and making great progress in view to the commencement of active operations. The Commander-in-Chief's arrival was daily

expected, and all branches of the army strove to prepare for that event by pushing forward the work they had in hand. Sir Charles Staveley, who had commanded in Abyssinia since the beginning of December, afforded the greatest assistance and encouragement to all departmental officers; and the sanitary condition of the camp, and the efficiency of the Transport Train, especially engaged his attention. Major Murray's artillerymen of the G-14 Armstrong Battery, Colonel Duffin's 33rd Regiment, and Major Beville's Beloochees volunteered to receive a certain number of uncared-for mules and to get them into some sort of condition. Captain Twentyman, senior officer of the Transport Corps in the country at this time, held no sinecure. The Egyptian and Persian muleteers were almost unmanageable, and numbers of mules arrived from Europe without any muleteers to take care of them.

At this same time, the beginning of January, Annesley Bay was the haven of a large fleet of steam-vessels and other transports; and every endeavour had been made on shore for the landing and reception of the troops, animals, and stores with which they were freighted. The stone pier, over 900 feet in length, and giving a depth at its head of seven feet at low water, was nearly completed, with a condensing engine and apparatus at its extremity. The immense traffic which ensued at

this pier while still under construction, naturally impeded the work of completion; and as its use in this condition was inevitable, the Engineers were fairly forced to retire before the overwhelming advance of men and animals, compressed hay and rum-casks, railway iron and sleepers, and the hundreds of other equally bulky stores and material which comprise the baggage of an army when operating under disadvantageous circumstances. A second wooden pile pier, intended for the use of the Commissariat department, was also in progress, but was not sufficiently advanced to be as yet of use. This pile pier was subsequently completed to a length of 1,200 feet, and when handed over to the Commissariat, the stone pier, somewhat relieved, was lengthened, improved, and raised throughout. Several large sheds had been, and were still being erected for the protection of perishable stores; and a railway, connected with the already completed pier line, was now under construction. The shore being a very gradually shelving beach, the pier, which was erected on a raised spit of alluvial deposit at the mouth of the Hadâs, could only be approached from the rear during spring tides, which covered the low portions of the adjoining shore. To obviate this flooding of valuable ground, which the Commissariat department could not be induced to forego from its proximity to the landing-place,

a low embankment was commenced at ordinary high-water between the two piers. Sir Charles Staveley kindly allowed the Engineer department the services of all available troops to execute this not very pleasant work, but while it was in progress the highest spring tides occurred, which caused the flooding of a portion of the Commissariat ground. Fortunately but little damage was sustained by the stores, the floors of the sheds containing the perishable articles being well raised. The encroaching sea was let out at low water, and subsequently the embankment was retained with stone and biscuit-casks.

The Bombay Sappers, who had been employed at Zulla at the commencement of the works above named, were now all engaged in the passes, having been relieved by the Madras Sappers, commanded by Major Prendergast, V.C., R.E. The G. H. and K. companies, representing the Madras Corps in Abyssinia, proved themselves most skilful in all the work they undertook, and fully sustained the reputation that corps has always borne in India. For some time these Sappers were engaged upon the heavier works at Zulla, and the pile pier was mainly constructed by them, assisted by a party of Chinese carpenters, the work being under the direction of Captain Chrystie, R.E., and subsequently under that of Lieutenant Lee, R.E. The railway, which proved

the heaviest work of all, was commenced by the Sappers and the men of Captain Blakeney's Army Works Corps, and was subsequently carried on by Captain Blakeney's corps, by Major Chamberlain's splendid regiment, the 23rd Punjab Pioneers, and by the 25th Bombay Native Infantry.

Captain Edye, R.N., commanding H.M.S. *Satellite*, and Senior Naval Officer at Zulla, whose lamented death after the conclusion of the campaign has been previously recorded, had already organized the water-supply from condensation of the sea-water by the steamers in the harbour, and by the collection of a large number of iron ships' tanks on a raised spit of the shore near the pile pier. He had also commenced the formation of an artificial island about 800 feet from high-water mark, which was connected with the tanks on the shore by a wooden shoot. By this means, the labour of rolling the water-casks up the shelving beach was avoided. A second condensing apparatus was also in course of erection on this island. Sir Charles Staveley ordered the construction of a long wooden trough on the shore near the tanks; and, with the co-operation of Captain Edye, this trough was kept filled with water, and the Transport and other animals were watered from it with regularity at stated times.

Shortly after the arrival of Sir Charles Staveley, the officers of the Reconnoitring Field Force fell

into the positions respectively assigned them in the Expedition. Major Mignion, Assistant Commissary-General, remained for the present at his original post at Zulla, as Executive Commissariat Officer. His labours were increasing, for the daily food of the troops in the country depended upon his exertions and those of his subordinates. Major Baigrie, Assistant Quartermaster-General, joined Sir Charles Staveley's Staff. Staff-Surgeon Lumsdaine still filled the post of Sanitary Officer at Zulla, while Staff Assistant-Surgeon Martin joined the chief of his department. Captain W. W. Goodfellow, R.E., who had been so actively employed at Zulla, was now about to be relieved, his services having been transferred to the highlands. His brother, Captain Charles Goodfellow, V.C., R.E., had just arrived as Brigade Major of Royal Engineers.

Captain B. H. Pottinger, R.A., Deputy Assistant Quartermaster-General, was at this time endeavouring to conduct a survey down the valley of the Mai Muna, from the ravine near Senâfé down towards the head of Annesley Bay. This officer was prevented by the mountain tribes from carrying his survey operations very far down the valley. The natives did not attack him, but expressed their intention of putting a stop to his exploration; and he wisely refrained from resenting this interruption to his proceedings. It was not considered worth while

to support Captain Pottinger, so far from the route of the army, with a force sufficient to enable him to complete his survey. Nothing was lost by the non-completion of this reconnoissance, which never had any great value. It was not doubted, that if a passage could be made through the mountains down the valley of the Mai Muna, or through ravines branching from that valley to the head of Annesley Bay, such a line would prove to be shorter than the selected route by the Komaylé Pass. But such a short cut would certainly have proved, like many others, the longest way round, and the seeming paradox admits of easy explanation. The adopted route by Komaylé had a gradient of nearly 1 in 41, with steeper portions at Sooroo and Rahaguddé, and a short ghaut of a couple of miles of 1 in 15 at the end. There was not a depression, or loss of height once gained, on the whole line. If it required sixty-three miles of road of this description to ascend to the highlands, what kind of gradients could be expected on a shorter line? When the Reconnoitring Party was exploring the different valleys, the great fear was, lest the routes followed should prove to be too short in comparison with the height to be surmounted. The great desideratum was a route long enough, provided height once gained was not subsequently lost. Any route shorter than that by the Komaylé Pass, must have entailed steep

gradients, and probable loss of height to avoid impracticable places. It is scarcely necessary to add, that such a route would have resulted in increased labour to the transport animals. The Hadâs valley route erred in another direction, and was given up in favour of that by Komaylé, for the one reason among others, that the somewhat easier general gradient of the pass entailed a very heavy ghaut or ascent at the end.

Subsequently, when there was a contingency of the campaign being prolonged over the rainy season, Sir Robert Napier ordered the commencement of the clearance of the alternative Hadâs route. Captain Chalmers and Lieutenant Hartshorne of the Bengal Army were appointed Assistant Field Engineers to carry out the work by means of native labour, commencing from Hadôda, to which place the late Mr. Dufton, of the Intelligence Department, had, with a gang of Shohos, cleared a road across the lowlands from Zulla. At the same time Captain Hills, R.E., commenced work at the highland end of the line, and made considerable progress. But the work did not prosper. Captain Chalmers, his companion, and the officer in command of their escort,—which consisted of a company of the 29th Bombay Native Infantry,—and seventy per cent of the sepoys were stricken down in a few days with a most malignant malarious fever, and the whole

party had to be recalled. Captain Hill's men were also so urgently required for other pressing work that they had to be withdrawn, not, however, before one of the Army Works Corps had been carried off and devoured by a lion when straying from his party working in the jungle near the famous gorge on the Tekoonda road. This was the only authentic case of the Abyssinian lion meeting the British intruders, and here, too, the beast was only known by his foot-prints.

The Post-office hut at Zulla was continually in a state of siege. The projector of the establishment could not have calculated upon the increased amount of correspondence per head which naturally arises in time of war. The feeble and flickering correspondence of relatives and friends breaks forth with renewed vigour during a campaign, provoked by feelings of anxiety, and by curiosity to receive authentic intelligence from the seat of war. The soldier, too, if he has any spare time, no longer experiences the difficulty of having to write with nothing to say. The circulation of newspapers also increases enormously, for no sooner does an army take the field than it is subjected to a heavy but friendly fire from every newspaper office in the kingdom. The question of "What do they say in England?" is replied to by the mother-country by the despatch of sackfuls of the current

daily literature. The Zulla Post-office with difficulty sustained this perpetual paper bombardment; for no sooner were the English mails distributed and despatched up country, than the Indian mails would arrive, demanding a repetition of the process. The Indian mails came direct from Aden, but, to save loss of time, those from England, conveyed on board the Peninsular and Oriental Company's vessels *en route* to Aden from Suez, were delivered over to a steamer sent from Annesley Bay to intercept them off the Island of Jébel Tair. This arrangement did not answer well, the Zulla steamer sometimes missing the other. It was consequently after a time abandoned, and the mails then came direct from Suez.

The operations of the Bombay Government, so far as concerned the Engineer Department, were conducted in the most economical manner. The originally projected Commissariat store-sheds, required at the base of operations for the storage of perishable provisions, were considered too costly, and buildings of the most simple construction were only allowed. Also, desirous of providing the railway sent for at the most reasonable cost, the Government did not order the plant and rolling-stock new from the manufacturing establishments, or enter into a costly contract for the execution of the work, which they considered might be carried out by

their own officers and establishments. They ordered that the laid-by harbour works tramway at Kurrachee should be sent to Abyssinia, adding plant obtained second-hand at Bombay. The rolling-stock was also obtained from the Kurrachee and other Government works, supplemented by purchases from the Railway Companies. That the Kurrachee rails were not in a good enough condition for the work required of them was, of course, not the fault of the Government, but of the local officers who despatched them without reporting on their condition. Unfortunately the gauge used throughout India is a broad 5 ft. 6 in. gauge, which is far too great for the purposes of war, entailing, as it does, an enormous weight of plant in excess of that pertaining to a narrower gauge. The Engineering Department of the expedition, upon which devolved the construction of the railway, was therefore fairly overweighted by the use of the Indian gauge; but it was quite out of the power of the Government in India to supply themselves a railway of any other description.

As rails of several patterns were sent from India, it was intended that each description should be stacked on shore prior to use, to obviate the inconvenience likely to arise from having more than one pattern. This arrangement could not be carried out, for, with the large number of transports un-

loading at the same time, it was found impossible to effect so desirable an operation.

With respect to railways required for military purposes during the operations of war, in the official report of the proceedings of the Engineer Department during the Abyssinian campaign, an opinion was given, that such works should be carried out entirely as a civil work by engineers and contractors who make it their business to construct railways, and who would bring to bear on the works their own experience and that of their professional establishments. This opinion, which subsequent reflection has led the writer to desire to modify, was given at a time when the officers of the department engaged in superintending and constructing the railway in the lowlands were worn out with fever and the extreme heat of the climate. Such works had never, until that time, formed part of the duties of the Engineering branch of the army, which consequently felt severely the heavy drag thereby thrown on its resources. But this arose mainly from two causes already mentioned, namely, the weight of the railway plant for a 5ft. 6in. gauge, and the intense heat which prevails upon the shores of the Red Sea. For the construction of the railway, an Army Works Corps of nearly a thousand natives of India was sent from Bombay; but their labour was so constantly required in separate detachments in

connection with skilled workmen on the multifarious works in progress at Zulla, and in the passes in keeping the roads in order, works for which soldiers were unfitted, that very few were left for the railway. The consequence of the withdrawal from the railway works of the men intended to construct it was, that the European and Native troops were called upon to supply the necessary labour. The Europeans were not long permitted to engage in the work, the climate being too exhausting for them; the Native Infantry regiments may therefore be said to have borne the heat and burden of the day. All the troops were called upon at different times to put aside the rifle and musket for the pickaxe and shovel, but the railway was mainly constructed, under Captain Darrah's superintendence, by the Punjab Pioneers and the 25th Bombay Native Infantry, the skilled artificers being volunteers from the European regiments, and a few Chinese.

The Shohos, though willing enough to earn money or grain by light work or well-digging, to which they were accustomed, would not look at the railway works. As has been experienced at Aden, it requires the lapse of years spent in contact with civilization before semi-civilized Bedouins can be brought to engage in labour requiring a certain amount of skill and organization as well as physical power.

It may be taken for granted, that in future, in the military expeditions which the British nation may from time to time be compelled to engage in, that when the theatre of war is out of Europe, or, perhaps, even within it, it will be found necessary to construct railways to assist in the operations of land transport. Seven miles of railway were required in the Crimea and twelve in Abyssinia, which would very likely have been increased to fifty miles had the campaign been prolonged to another season. The Abyssinian railway, such as it was, complied with all the requisitions made upon it, and on its completion to the sixth mile, half-way to the mountains, on the 19th February, the Land Transport corps were enabled to make their head-quarters at Komaylé, and to relieve the supply of condensed water at Zulla of the great demand made upon it by their thousands of mules and other animals. These henceforth went half-way to the coast, picked up the stores carried out by the railway, and returned to their own camp the same day. The railway was subsequently prolonged to within a mile of Komaylé, and at the conclusion of the campaign conveyed all the troops and their baggage across the arid lowlands to the lighters, which were at once towed out to the transports in the harbour.

With the examples of the Crimea and Abyssinia

before him, a military commander will in future, in making his calculations and arrangements for land transport, attach great importance to the aid he is likely to obtain from the use of a line of railway. But it is necessary that the construction of the work should be more speedily accomplished than was found possible in Abyssinia. It is quite time, therefore, that not only should the best description of railway adapted for military purposes be decided upon, but that the agency to be employed should also be determined. This decision should not be left for settlement until the occasion demands it. The Minister of War should not be inundated with rival schemes from the fertile imaginations of engineers and contractors, and be thus compelled, by reference to committees or qualified officers, to delay the order which is to comply with the demand of a general perhaps thousands of miles away.

The patterns of railway plant and rolling-stock having been determined, there would be no necessity for keeping any quantity of either one or the other in store. Private establishments in England would, if furnished with a pattern, turn out in a very short time any quantity required. All that is necessary would be to have patterns of rails, waggons, &c., in store, and to provide two or three miles, with a complement of rolling-stock, for the practice of those to be employed in its construction.

It may not be considered out of place here to discuss briefly the two practical subjects connected with a railway as a military work; namely, the description of railway material best suited for the purpose, and the very important point of agency by which the work should be carried out.

The gauge of the line should be 3 feet 6 inches, with rails 50lbs. to the yard. For a roughly constructed line, transverse sleepers of wood will be found superior in its results to the longitudinal sleeper, or the numerous other systems which have been invented for the purpose. The rails should be fish-plated with chairs and bolts. Joint chairs and light dog-spikes should especially be avoided. The sharp curves which naturally occur on a temporary and quickly made line, render it necessary that the rails should be strongly fixed to the sleepers. If this point is not attended to, the maintenance of the line will absorb a large amount of labour, and prove a constant source of annoyance.

The locomotives must be tank engines. The ordinary four-wheeled tank engine, with a wheel-base of 6 feet, weight about 18 tons, would be found a very useful description of engine for shunting or light work; but for heavy work over steep gradients more powerful engines should be employed. A tank engine on six wheels, 3 feet or 3 feet 3 inches in diameter, with a travelling axle-

box at the trailing end to enable the engine to travel round sharp curves, would be a good description of locomotive. Such an engine, weighing about 22 tons, would pull 15 waggons over gradients of 1 in 40. Twelve to fifteen miles an hour is sufficient speed for a railway for military purposes. The waggons should be all of one pattern, and adapted for the conveyance of troops as well as of stores. Wrought iron would probably be found the best material for the waggons. If of iron the waggons could be made with a well between the wheels, which would lower the centre of gravity of the load, and, at the same time, provide longitudinal seats for the men. With flat-bottomed waggons the sides might be provided with iron flaps, which could be raised as seats for soldiers, and lowered down when not so required. The sides of the waggons should not be deep, otherwise they are sure to be overloaded.

With respect to the agency by which such a railway should be constructed, it must be borne in mind that no scheme to its lowest detail can be devised irrespective of the consideration of the conditions of climate and country to be operated in. But it will be sufficient to the purpose to classify climatic influences under the two heads of "temperate" and "tropical." It must be laid down as beyond dispute, that European labour cannot be employed in the

tropics excepting as skilled labour under protection from the sun, and in superintendence. Labourers for hot climates must be drawn from the country itself, or from our Eastern possessions.

The British Army includes two scientific corps, the one for the direction and management of ordnance of every description, which is chiefly manufactured under its superintendence, the other for the designing and execution of all military engineering works. The time has now arrived when the execution of railways for military purposes should be added to the list of the duties devolving on the corps of Royal Engineers. The Royal Engineers only require the requisite instruction at their head-quarter depôt at Chatham, to enable them to have the work as much at their fingers' ends as they have the construction of field fortifications, and the formation of pontoon bridges. With this necessary instruction, the officers and men of the Royal Engineers might in a temperate climate construct the whole work; and if extraordinary labour was required, the assistance of the Army Works Corps or of a regiment would most likely be found to be sufficient. Troops of the line are now being taught the use of the spade, and this instruction could not be applied to a better purpose than that above named. Even if it so happened that troops could not be spared for the duty, the officers and men of

the Royal Engineers could be employed in directing the works. By this plan, the monstrous evils which attend the employment with an army of gangs of men unaccustomed to restraint would be avoided.

The evils mentioned become aggravated in a tropical climate where any exertion produces thirst. A platelayer in Abyssinia, who, with the "cat" impending over him, thought himself excessively ill-used because he "didn't sign to no martial law," confessed that he could not work without being allowed to give the natives a "slap," his slap being a blow with a fish-plate, rail-gauge, or such like harmless (?) instrument. Other men tampered at night with the engines in order to break them down, and necessitated a guard being placed over them. The Locomotive Superintendent was accustomed to treat his engine to more alcohol, and consequently to raise more steam than he could blow off in the night. This worthy, on being removed to give place to an engineer officer of the Royal Navy, remonstrated with, "Why, sir, he's a low pressure man, while I'm a high pressure," and indeed he spoke the truth. But the climax arrived when the Provost Marshal reported he had got two engine-drivers, a fireman, two station-masters, and the railway *Superintendent of Police* in his guard all at one time! These few cases will suffice to show why

disciplined men should fill every post they could possibly be employed in.

In a tropical climate native labour is indispensable. Had a corps of English navvies been employed in constructing the railway in Abyssinia, great loss of life would inevitably have taken place amongst them from sun-stroke and heat apoplexy. In the tropics, therefore, native labour, in the form of an Army Works Corps, uniformly dressed and amenable to discipline, would have to be engaged to work under the superintendence of the Royal Engineers. The scheme here laid down does not go further than the construction and maintenance of the line of railway. The locomotive department is another affair, and civilians would always have to be engaged for that branch, as long training and experience is absolutely necessary to produce a driver. The Locomotive Superintendent and his fitters would also have to be civilians; but all others, including Traffic Manager and Station Masters, should be military men.

Sir Robert Napier, Commander-in-Chief of the Expedition, arrived in Annesley Bay on board H.M.S. *Octavia*, the Flag-ship of Commodore now Sir Leopold Heath, on the 3rd January, 1868, and at once assumed personal command of the troops, notifying the same in the following General Order :—

"Adjutant-General's Office, Head-quarters,
On board Her Majesty's Ship *Octavia*,
Annesley Bay, 3rd January, 1868.

"Lieutenant-General Sir Robert Napier assumes personal command of the troops in Abyssinia this day.

"Sir Robert Napier congratulates the advanced force on the progress made in the expedition by the establishment, in spite of great difficulties, of a firm footing at Senafé, on the high land of Abyssinia.

"The Commander-in-Chief has already acknowledged the services of the reconnoitring party, which have been marked by the greatest energy and intelligence.

"Two years' experience of the command of the Bombay army, and of the high military spirit which animates it, prepared Sir Robert Napier to expect the excellent example set by the advanced force under Colonel Field.

"From the moment of their landing they have been indefatigable in promoting the success of the operations by their good conduct and zealous labour in opening roads and preparing the way for the army.

"Sir Robert Napier is confident that every soldier in the force appreciates the honour of having been selected to carry out the commands of her Majesty the Queen of England, and that neither hardships nor dangers will arrest it in pursuit of the objects of the expedition—the release of our countrymen detained in a painful captivity, and the vindication of the dignity of her Majesty's empire.

"By order of his Excellency the Commander-in-Chief.

"W. E. MACLEOD, Lieutenant-Colonel, Acting Deputy Adjutant-General, Abyssinian Expeditionary Force."

After the Commander-in-Chief came on shore, and inspected the camp and works at Zulla, his Excellency issued the following General Order :—

"Adjutant-General's Office,
Head-quarters, Camp Zoulla.
7th January, 1868.

"Sir Robert Napier, after a personal inspection of the works carried out at Zoulla, performs a very grateful duty in recording publicly the credit due to the Engineer department under Lieutenant-Colonel Wilkins, Chief Engineer, Captain Goodfellow, Field Engineer, and the Companies of Bombay Sappers, for the great progress made in converting a desert shore, at first view utterly devoid of resources, into a very convenient port and depôt, by the construction of an excellent stone pier, store sheds, and other works, which would have been creditable under very favourable circumstances.

"In these labours, the most valuable assistance has been afforded by the Senior Naval Officer, Captain Edye, and the officers and men of the ships under his command, in maintaining a supply of condensed water from the shipping under great difficulties, the erection of condensers on shore, and aiding all departments to the utmost extent of their resources.

"The labours of the sanitary officer, Dr. Lumsdaine, and of the Commissariat Officer, Major Mignion, have been equally important and praiseworthy.

"The Commander-in-Chief is greatly indebted to Major-General Sir Charles Staveley, second in command, for having combined and directed the energies of all departments, so as to produce the present condition of well-regulated order.

"The general progress made could only have been

accomplished by the hearty and unanimous devotion of all officers and their departments, for which his Excellency desires to express his warm approbation.

"By order of his Excellency the Commander-in-Chief.

"W. E. MACLEOD, Lieutenant-Colonel, Acting Deputy Adjutant-General, Abyssinian Expeditionary Force."

Comments were made in some quarters in England on the delay which occurred before the Commander-in-Chief proceeded to his post, as if the army was only awaiting his arrival to commence active operations. Sir Robert Napier was the best judge of what was necessary to be done at the base of operations in India, and he was, of course, well aware that the real business of the campaign could not begin until his requirements were complied with. Gentlemen who run off to the continent in a hurry leaving orders that their portmanteaux are to be packed and sent after them, don't always find that they have got what they most want. For a like reason, the Commander-in-Chief preferred to see the *impedimenta* of his army well packed in India before he started for the seat of war. As it was, Sir Robert Napier was forced to wait nearly a month at Zulla before he was in a position to make any further advance into the country, and during this month he directed the proceedings of all departments, even to the most minute detail, in such a manner as alone enabled him to move when he

did. It has already been mentioned how Sir Robert Napier had not only foreseen how desirable it would be to have wheeled carriage between Post No. 1 on the coast and Post No. 2 on the highlands, but had, from the very first, determined to have a road fit for the purpose made up through the mountains. This very heavy engineering work was not completed on the arrival of the Commander-in-Chief at the beginning of January, but by the end of the month the Sappers and Beloochees completed the road through the Sooroo Pass, and effectually vanquished the Devil's Staircase. At the same time the road through the Rahaguddé defile and up the Senâfé ghaut was also completed.

The following memorandum issued by the Commander-in-Chief affords full information of the state of affairs on his arrival in the country as well as of his subsequent proceedings up to date :—

"MEMORANDUM.

"Commander-in-Chief's Office, Abyssinian Expeditionary Force, Camp Senâfé, 1st February, 1868.

"When his Excellency Sir Robert Napier, Commander-in-Chief of the Abyssinian Expeditionary Force, arrived on the 3rd January at Annesley Bay, matters were in such a state as to preclude all possibility of an immediate advance. The troops encamped at Zoulla were all employed in working parties. High tides threatened to flood the Commissariat stores, and every exertion was required to construct dykes for their safety, and to prevent the

inroad of the sea. The supply of water at Zoulla depended upon working parties continually pumping and landing water condensed by the shipping. The railway demanded the daily employment of a large number of men. The Commissariat supplies at Zoulla, and on board the shipping in harbour, were limited; and large working parties were required to disembark the latter as quickly as possible. The state of the Transport Train, owing to an original defective organization, the epidemic among the animals, and the long marches to the highlands, without a proper supply of water, was not only very unsatisfactory, but most uncertain. This uncertainty was not removed until the Commander-in-Chief despatched an officer of his personal Staff, with an officer of the Land Transport Train, to personally investigate the condition and the working of the Land Transport Train at every station between Zoulla and Senafé. The report of these officers showed that the Transport Train had, through the above-mentioned causes, dwindled down to less than 5,000 mules and ponies, and about 1,100 camels. For the latter, at this time, the road was practicable no further than Koomaylee. It was then necessary that the Commander-in-Chief should turn his almost undivided attention to the improvement of the Transport Train, and the despatch of supplies to Senafé from Zoulla. It was at Zoulla only that these arrangements could be made, and, until the 25th January, their supervision, and the state of the post of debarkation itself, required the constant attention of the Commander-in-Chief, and demanded his continual presence on the coast.

"Nor could, during the same period, large bodies of troops be moved up from Zoulla to the highlands, for those that were at Zoulla were required for the daily working parties; and even if they had not been so, there

would not have been the means of feeding them at Senafé, and their movement to the front would have monopolized the transport so urgently required to feed the garrison at Senafé. At the latter place, on the 3rd January, there were some 1,300 sabres and bayonets, and four guns, with nearly 2,000 followers. These were living from hand to mouth. The Transport Train could hardly deliver daily their daily consumption.

"Neither could more troops be brought quickly to Annesley Bay. The apprehension of disease among Europeans on the coast, and the impossibility of at once marching all disembarked regiments to Senafé, have caused some regiments to be delayed in their departure from India. These apprehensions, founded on the information of every traveller, were fortunately not realized; but slight symptoms of diarrhœa made the Commander-in-Chief apprehensive that it might be dangerous to crowd many troops together on the waterless plain of Zoulla. Other reasons also prevented the rapid bringing forward of troops to Annesley Bay. The Commissariat stores for six months, which had been solicited by the Commander-in-Chief in September, only reached Annesley Bay about the same time as himself. Their debarkation required time. The supply of water at Zoulla was also scanty, and often precarious; the breaking of a valve of a pump, or a slight accident to the delicate machinery of a condenser, at once limited the supply of water, and, perhaps, placed men and animals on half rations of that absolute necessity.

"By the 25th January these difficulties were in great measure overcome. The Commander-in-Chief immediately started for the front. He inspected minutely the stations in the pass, and reached Senafé on the 29th.

"On the 30th January a detachment of Scinde Horse occupied Attigerat, thirty-six miles in advance of this place.

Focado, twelve miles nearer Senafé, was occupied on the 29th by one company of the Bombay Sappers and Miners. Two companies of the 33rd Regiment, and two companies of the 10th Native Infantry, occupied Mai Magrab on the 26th; and on the 31st, two companies of the 33rd and two companies of the 10th Native Infantry were advanced from Senafé to Goona-goona, a distance of twelve miles. Ten days' supplies were sent forward from Senafé with these troops. There still remain at Senafé an average of forty-five days' rations. The road from Zoulla, through the Koomaylee Pass, has, by the end of January, been made practicable for wheeled transports; and on the 30th of that month, a convoy of 74 carts, laden with Commissariat stores, arrived at Senafé. To-morrow, a second convoy, of 60 carts, will leave Zoulla for the same place. The road from Senafé to Attigerat will ere long, having required comparatively little labour, be available for wheeled transport, and the force will be able to advance, with a month's supplies, to Antalo.

"Three companies of the 4th King's Own Regiment came into Senafé on the 30th, and one Steel Mountain Battery arrived yesterday.

"Major Grant, who was sent by the Commander-in-Chief to Kassa, Prince of Tigré, has received a most flattering reception near Adowa. The Commander-in-Chief expects to receive a return visit from Kassa at Attigerat in a few days, and from this interview anticipates important results in obtaining supplies during the march through Tigré. The Commander-in-Chief will then advance as quickly as possible to Antalo.

"A telegraphic communication has just reached the Commander-in-Chief, which informs him that seven companies of the 45th Regiment have arrived in Annesley Bay, three of which have already disembarked. It is

expected that this evening the telegraph will be completed between Rareeguddy and Senafé.

"The Commander-in-Chief, in closing this memorandum, would wish to express his deep obligations to the officers and men of every branch of the service under his command. The most severe labour and the inevitable hardships of a campaign, which has been inaugurated by pioneering a road for seventy miles through rugged and desert mountains, have not in the least daunted them. The labours of the working parties at Zoulla and on the railway have been very severe. The construction of the road through the tangled masses of gigantic boulders of the Sooroo defile, and the carrying of the same road through a vertical distance of 700 feet up the steep ascent to Senafé, are works on which any army of any nation might look with pride. At these two places, the Bombay Sappers and Miners, and the 1st Belooch Battalion, and the Bombay Marine Battalion, were principally employed.

"Nor can the Commander-in-Chief refrain from expressing his thanks due to Commodore Heath, C.B., and the officers and men of the Navy, who have shown an ever-ready energy and zeal in the furtherance of every object of the expedition; as well as to Captain Tryon, R.N., the able and active director of the Marine Transport.

"R. NAPIER, Lieutenant-General,
"Commander-in-Chief."

From the days of Clive downwards our Indian armies have been accustomed to encounter war without long lapses or intervals of time. Their enemies have never suffered them to grow rusty; they are consequently always prepared for war, and engage in it without any fuss or confusion.

The important branches of Commissariat and Transport conduct their operations in India, owing to its vast area and resources, much in the same manner during peace as in times of war. India is one vast Chobham or Aldershot, with the advantage of being a real camp instead of a mock one. Notwithstanding all their local experiences, supplemented during late years by foreign expeditions to Burmah, China, and Persia, those armies have greatly increased their knowledge of the conduct of war under difficulties through the Abyssinian campaign. The experience gained by every branch of the service, nay, by every individual officer engaged in the Abyssinian expedition, in the practical working of military operations undertaken in a distant and, in this case, an extraordinarily difficult country, has been very great. Obstacles, pronounced by many foreign nations, and by many of our own people experienced in such matters, as insuperable, were encountered only to be overcome. If this has been accomplished at great expense, and experience is of little value unless dearly bought, it will bear good fruit in the future.

Statesmen may well object to the word *prestige* as presenting a valid reason for engaging in war, which is necessarily followed by the impoverishment of the nation engaging in it; but if the honour of a people demands the sacrifice, the *prestige* result-

ing from success may fairly be accepted as a set-off to the "little bill."

With respect to *prestige* resulting from our operations in the Red Sea, the English public have no idea of the effect which has been produced in the minds of Eastern nations by the late success of the English. It has been witnessed and duly made note of by all the nations to the east of and bordering on the Red Sea, and perhaps by some to the west of that longitude as well.

CHAPTER X.

THEODORUS—MOUNTAIN AND LOWLAND TRIBES AND COUNTRY.

Boundaries of Abyssinia—Theodorus—His Claims—Sultan of Turkey—Pretensions of the Turks—Armenians and Copts—Ejection of the Abyssinians from their Chapel at Jerusalem—Career of Theodorus—His desire to despatch an Embassy to England—His Imprisonment of the British Consul and Envoy—Despises the British Force—His Death—Comparison between Theodorus and the Mahratta Patriot Sivagee—Mountain and Lowland Tribes—Consul Plowden's Description—Shohos—Danâkil—Bedouins—River Hadâs—Zulla—Water Supply—Flora of Lowlands—Adulis—Shohos' Dress and Arms—Shoho Women—Bedouin Beggars—Food of the Natives—Mode of Burial—Shoho apathy—Their dislike to good Roads—Their Astonishment—Excellent Guides—Climate of Lowlands—Intense Heat—Tremendous Storm—Dust Storms—African Glanders—Domestic Animals—Fauna—Birds—Snakes—Locusts—Flora of Passes—Physical Geography of the Lowlands—Characteristics of Inland Salt-Lakes—Process of Destruction of the Highlands—Hopeless Prospects—Egyptian Nile Expedition—Mountain Storms—Filling up of the Red Sea—Geology.

UNDER the name of Abyssinia it has been customary to include, not only the slopes and valleys of the mountainous region between the high table-land and the plains below; but the lowlands between the

base of the mountain range and the Red Sea coast have also been regarded as a portion of the country comprised within that name. But this is incorrect. Abyssinia proper, as far as the eastern boundaries are concerned, terminates at the edge of the summit of the mountains. The Abyssinian Christians are confined somewhat within this boundary, which must be considered their frontier, although it is well known that King Theodorus claimed, as belonging to his kingdom, the whole country down to the coast, including Dissee island. It is doubtful if ever the empire of Abyssinia comprised the whole of the lowlands. It is true that the lowlands produced an article of great value, particularly to a nation accustomed to feed on raw meat, namely, salt; and that the crystalline salt, cut out of the surface of the Salt Lake, situated a hundred miles south of Massowah, became to be regarded as the currency of the country, and up to the present day holds its place as a circulating medium among the people. Nevertheless, the country itself being almost a desert, as unfit to live in as the Sahara—the heat being greater there than, perhaps, in any other region of the globe—it is not surprising that the Abyssinians should have had no great desire to occupy and retain such an awful country, so unlike their own, which was comparatively a Paradise.

Theodorus entertained very broad views regard-

ing his rights. He considered the lowlands as pertaining to his kingdom, and was, indeed, powerful enough at one time to obtain tribute from the Nâyib of Harkîko on the coast. But, not satisfied with this wide range of territory, he formed still grander ideas. He laid claim to Jerusalem. Of that holy city he said the Turks had despoiled him. He also considered he had a good title to the empire of British India! Not content with his descent from Solomon by the Queen of Sheba, he deluded himself into the belief that he inherited India by being a descendant of Alexander the Great and an Abyssinian princess, which either proves that that lady could have been no better than she should have been, or that he libelled her character, as he had previously done that of the famous "Queen of the South."

Wild as these claims of Theodorus may be considered, it is a common idea in the Turkish dominions that the Sultan is rightful King of India; and, although neither that potentate nor his predecessors ever held sway over Abyssinia, the Christian people of that country are even at the present day regarded by the Porte as subjects. The Abyssinians, until lately, held possession of a chapel within the precincts of the church of the Holy Sepulchre at Jerusalem, on the traditional title, as alleged by them, of the gift made by King Solomon to the Queen of Sheba.

The Armenians and Copts disputed the title of the Abyssinians to the chapel, and a few years ago, with the charming feeling which animates those pseudo-Christians, burned the Abyssinian records on the plea of plague infection. The Abyssinians would not claim the justice of the Pasha as subjects of Turkey, as they were desired to do, and were unable to substantiate their right by documentary evidence, or to obtain the protection of the British Consul. Virtue meets its own reward in the Turkish dominions, so the Armenians obtained possession of the Abyssinian chapel.

King Theodorus, who, at the commencement of his career, had such high aspirations for the advancement and glory of his nation and his own power, must, undoubtedly, be considered as having been at that period a remarkable man, and in advance of his time. He was, perhaps, about the only man in Abyssinia who did not dread innovation; and, although imbued with a strong religious feeling, he was soon led to despise his priesthood for what he regarded as their extreme deceit, superstition, and credulity. He was a brave and skilful warrior, an able commander, but no administrator. Depending entirely upon his martial ardour and prowess, having no natural talent for civil government, he neglected to consolidate his power when acquired. Neither he nor any of his advisers were able to

inaugurate any system of government, the consequence of which was, that the King exhausted his resources in flying about the country to chastise rebellious chiefs; and, having no civil government aided by well-organized military power, he had no sooner put down rebellion in his front than it sprang up again in his rear. This harassing work kept his mind constantly fixed on warlike schemes and strategy, and he had no time to learn to govern. Meeting with no aid from those around him, and knowing they were incapacitated from giving sound advice, he kept his own counsel and confided in no one. So subtle was his mind, and so sudden and resolute was he in action, his people learned simply to obey his directions, and became mere machines in his hands. But machines in time become ruined and destroyed, and Theodorus began to find his engines of destruction wearing out from perpetual work. His character changed when he found he was unable to cope any longer with the difficulties which surrounded him. He regarded the brutishness of his followers and subjects as the cause of his want of success, and he saw that not only had he been unable to realize the exalted dream of his early career, but that he was no longer able to hold together the fragments of the Abyssinian empire which he himself had collected and united. Enraged with his feeble-minded subjects he had learned to

despise, he revenged himself for his disappointment by treating them with the utmost brutality. It made him mad to think of the position among nations to which he might have raised his country had his people possessed his own intelligence, and of what its true state was through their imbecility.

As a last resource, then, Theodorus, who had all his life appreciated the arts and sciences of the West, and who had obtained the services of European artisans, resolved to obtain the aid of what he considered, owing to the possession by the British of India and Aden, of the most powerful Christian nation of Europe. Often as an Abyssinian embassy to England had been projected, it had never been carried out. Egypt had a perpetual feud with Abyssinia, and the British Government and the Turk were friends—a point which Theodorus could never be made to comprehend. The English were thus precluded from conducting the embassy through Egyptian territory.

Theodorus, then, failed in getting an embassy to London to plead his cause and invite assistance; and thus being unable to reach the British nation in that way, he determined to do so in another. He accordingly resorted to the extraordinary expedient of putting the British Consul in chains. This having no effect in drawing the British lion from his lair, he put the British Envoy, sent to ask for the Consul's

release, in chains also. This last act was too much for the insulted nation to bear; and after considerable delay and some grumbling, the necessity of sending an armed force to compel the Abyssinian monarch to respect the laws of nations was conceded by all parties in the kingdom.

Theodorus was not alarmed by the approach of the British, for his set policy had brought them there. Having obtained what he had long sought, Theodorus, doubtless, considered that he had not much to fear from the invaders. By securing himself in Magdala with his prisoners, he could treat with the English on fair terms. He would give up the prisoners unhurt, and, in return, obtain the assistance of the British troops to settle his dominions for him, to help to chastise all the rebels, and again place him in the position of head of the whole empire. Theodorus, the consummate master of sweet words, thought that he might reach his desires in this manner; but when the time came for the British commander to place his foot on the first step leading to his stronghold, the apparent want of strength and small numbers of the assailing troops led the King to believe that another and a better course was open to him. What if he could after all beat the Briton, who either had not put forth his strength, or was weaker than he had been always represented to be? A beaten foe would be

far more serviceable than a conquering one, bound only by promises to assist. Let him try the experiment. If he lost the battle, terms could still be made, and, after the Abyssinian custom, the rivals would become friends for a time. Theodorus was beaten, and, in a spirit of magnanimity, he complied with the first request of the British commander, thinking that thereby he must assuredly conciliate his late foe.

But the British General was not satisfied with this generous act alone, and required something more as an expiation of Theodorus' unjustifiable conduct to the captives. He called upon the King, the descendant of Solomon and of the Queen of Sheba, of Alexander the Great and of the frail Abyssinian Princess, to present himself, and sue for the clemency of her Britannic Majesty's representative; to humble himself, in fact, in a manner that he regarded as an insult to his kingly dignity, and which made his hope of success turn into the madness of despair. This heroic chief, once possessing many noble qualities, but now overborne by an ungovernable and savage temper which caused him to inflict upon his slavish subjects unheard-of barbarities, felt his doom was sealed, so far, at least, as his personal liberty was concerned; and rather than degrade the dignity of his high position, or subject himself to imprisonment, and, for all he

knew, torture, he resolved to die by his own hand sooner than surrender.

Two hundred years ago the son of a petty chief, whose character in many respects resembled that of Theodorus, brought himself prominently to the notice of his fellow-countrymen in Western India by his daring achievements and successful rebellion against the authority of the Emperor of Delhi. This young man, in a very short time, by his military prowess, and by the power and influence he thereby obtained over his followers, completely subverted the government of the Great Môgul in the plains of the Deccan, and in the mountains of the Kônkan, from the districts north of Bombay to the territory of the Nizâm on the west, and the dominions of the Râjah of Mysore in Southern India. When, by his military skill, Sivagee the Mahratta had thrown off the necks of his Hindoo countrymen the hated yoke of their Mohammedan rulers, he set to work to establish a civil code, founded on a system of his own conception. By this means he consolidated his own power and laid a permanent foundation for the fabric which he successfully raised, and which is known in the history of his country as the Mahratta Empire. Theodorus was, after all, but a poor type of the Indian patriot.

The Abyssinians, then, are confined to their high table-land, which is supported by numerous

gigantic spurs, mountain ranges in themselves, which slope down to the coast plains below. These spurs and the intermediate valleys are inhabited by a totally different race of people, nomads and Mohammedans, who live a pastoral but not an over quiet life. These people are called Shohos on the north-easterly ranges, and constituted the tribes with which we came in contact in the passes. Other races, not differing much from the Shohos, inhabit the lowlands, called Danâkil and Bedouins. These last-mentioned people are much weaker than the Shohos, and, inhabiting a wretched country, are a miserable race. Still, they cannot be considered the most miserable race of Africans after Sir Samuel Baker's description of a starved tribe inhabiting a marshy country on the banks of the Nile.

The following extract from a report submitted to the Foreign Office by that acute observer and very able man, the late Consul Plowden, gives such an excellent description of the Shoho and Danâkil tribes with which our force had to deal, that I have had no hesitation about inserting it here, particularly as it is not taken from any published work, but from a Blue Book not readily accessible to the general reader. The report bears date the 9th July, 1854 :—

"I have stated that a line of country some seventy miles in breadth or more, separates Chris-

tian Abyssinia from the Red Sea, being occupied by more barbarous tribes, and reaching from the Gallas of Azobo to the dominions of Abbas Pasha, north-westerly from Massowah.

"The northerly neighbours of the Azobo are the Taltals, lying east of the district of Agamee in Tigré. They are nomades, as all that I have now to describe, and call themselves Mahomedans, though their creed is far from orthodox, and I do not suppose there is one that can read the Koran. It is certain that, by their unceasing feud with the Abyssinians, they have acquired a strong hatred of Christians. They eat little or no corn, and never sow, living on milk and the flesh of goats and oxen. These are generally thriving, as they have the benefit of two rainy seasons, and luxuriant pasturage nearly all the year round. The rains of Abyssinia extend to within fifty or sixty miles of the sea in the months of June to September, and the rains of the coast are variable till the end of March, from October or November. They are unacquainted with horses, and are remarkable for bodily vigour and speed of foot. In this province are the plains of salt and sulphur that supply all Abyssinia; the road from thence to the sea is nearly a level plain, and the direct port is Amphylla. This was the road that Mr. Salt proposed to open. It was traversed at great risk by an Englishman, Mr. Coffin, who still

lives in Abyssinia, and by him alone. The English Government had, I believe, consented, when the death of the Ras Welda Selasee, and subsequently that of Mr. Salt, prevented the further progress of the affair, which was afterwards lost sight of. Mr. Coffin performed this journey, I believe, forty-five years ago.

"The Taltals are now treacherous and blood-thirsty, even towards each other; to strangers implacable and dangerous. They are hospitable from pride and custom; but a hospitable reception by no means insures the life of the guest; and when a Taltal enters the hut of his relative he lays his sabre across his knee and places his spear and shield ready for his grasp. I attribute something of this fierce character to the heating nature of their diet; and it may be generally observed amongst the tribes who eat no bread. They are impatient of all yoke, and live independent of all law, with here and there a man possessing, like the ancient patriarchs, some influence from age and wealth in flocks and cattle, or in youth from sagacity and daring. These people scarcely know the value of money, and the Turkish Government at Massowah of course makes no attempt to encourage any communication. They are, therefore, totally ignorant of the world without, save the nearest districts of Abyssinia, but under better management would, no doubt, crowd to the

market of Massowah, which is now often unfurnished with the necessaries of life; and their province would soon be as safe to visit as any other part of the country. Their sulphur should form a valuable article for trade, and their territory might be highly cultivated, and would afford much produce for export, besides bread for the inhabitants. Many years since a small body of Turkish troops were defeated and destroyed to a man by the Taltals of Kherto; having ventured to advance inland from the port of Amphylla. The attempt has never been renewed, and they have no garrison at that place.

"The Danakil, who extend along the sea-coast for a hundred miles or more, speak a dialect of the Taltal language, and have much the same character, being only poorer, less vigorous, and less courageous than their neighbours of the mountain. Not many years since both these tribes purchased stolen Christian boys, and sacrificed them in some superstitious rite. And although one of their chiefs assured me that this practice was discontinued, I doubt him much. Camels are bred in great numbers here, and the cattle and sheep of the Danakil are also numerous and in good condition, but never appear at the Massowah market, though within six hours' sail of a dull craft. Ostriches abound, but are little hunted, firearms being totally unknown. Elephants are plentiful, but are only killed by a

few Abyssinian hunters, and in small numbers. The wild asses are numerous on the coast, and the zebra is said to exist in the interior, as well as the rhinoceros. The wild ass is sometimes taken in pits, his flesh being highly prized by the Arabs of Yemen as medicinal food.

"The salt lake of Booree (Buré), near the coast, formed of a filtered deposit at a lower level than the sea, furnishes that article for consumption to the Shohos, and some provinces of Tigré, but it is not used as a circulating medium.

"To the northward of the Taltals is the powerful tribe of Shoho, now divided into two branches, called Assoworta and Tora. Through their territories pass all the roads now in use from Abyssinia to Massowah. Their language is said to bear a close affinity to that of the Adaiel, and there are in it many words of Galla origin. Partly through fear of their Abyssinian neighbours, and partly for the love of gain, acquired by their being on the direct road for commerce, they suffer merchants or travellers to pass in safety, furnishing guides for a payment proportioned to the wealth of the caravan. The road for fifty miles is in their undisputed possession, and includes lofty mountains and narrow defiles, that only require firearms to render them formidable; but though these Shohos are constantly at Massowah, and see the Abyssinian merchants purchase those

matchlocks whose force they have often felt, but one instance is, I think, known of one of this tribe possessing a musket. The mortal fear of innovation afflicts them like all the Abyssinian race, so they invest their money in cows, living miserably, that many of these may be slaughtered at their death, and devoured by a weeping assembly upon their tombs. They are scrupulous Mussulmans, not even touching any intoxicating liquor. In keeping faith they are more scrupulous than the Taltals, and a guide who requires and gives the oath of good companionship may be perfectly relied on. Though thieves by profession elsewhere, they seldom steal in their own district; but they are very pestilent beggars, their begging not being confined to those in distress, but practised by the whole tribe, the most wealthy being the most pertinacious, saying it is a right they have inherited from their fathers. They are annoying but not dangerous, except if any one attempts to pass through their country without a guide, when he will be lucky if he escapes with the loss of his property.

"The name of merchant is a scandalous reproach amongst them, and till very lately agriculturist also. For the last few years they have been attempting to cultivate barley with success; a wonderful step, still limited to a few individuals. They always eat bread when they can obtain it, exchanging the salt of

Booree (Buré) for the maize of Kalagoozai, with which province of Tigré they are usually on very good terms. This is a matter of mutual interest, as the cattle of the two districts thus enjoy the benefit of the double rainy season. They are constantly at war with the Taltals with various success. They also live in a republican fashion, with certain elders elected by themselves to settle disputes, and as the pay of the guides goes into a common purse, these elders receive a large portion. Owing to the influence that riches must always secure, these elections generally fall on the same families, and the office has thus become almost hereditary; but they are obliged to be very careful in exerting their power, and the rest of the tribe lose no occasion of wordily asserting their equality, nor allow any interference in their private affairs.

"The Shohos are kidnappers by profession; and avow it openly. Hundreds of Christian children are stolen by them every year: when they can they sell them secretly at Massowah, if not, they are disposed of at Zeyla (Zulla), from whence they are sent to Amphylla, and smuggled across to Yemen, if not purchased by the Taltals. Sometimes they are kept until they forget their origin and religion, or become too resigned to demand any change, and are then sold at Massowah as Gallas. These tribes still have a respect for the Naibs of Arkeeko, who kept them

in some order, till their own power was destroyed by the Turks, who have substituted nothing in its place. Zeyla (Zulla) is a large village of about three hours' journey inland from the ancient seaport of Adoolis, a city probably founded by one of the Ptolemies, opposite the island of Dissee, purchased by Lord Valentia. The ruins of Adoolis are visible. The proper pronunciation of Zeyla may be written thus in the German, 'Zühla.' Its inhabitants pay a small sum occasionally to the Turks, perhaps a hundred dollars when threatened, and are then left to smuggle and govern themselves as they please. The Shohos have no camels, and are not so rich as the Taltals, being also less fierce and intractable.

"On the plains betwixt the Shohos and the sea are the Bedouins: their name is somewhat used as a term of contempt, as though one would say the 'wanderers' or 'miserables.' These tribes, though unwarlike, are numerous; but as all their many enemies are superior to them in force, and as they have no strongholds for retreat in their level country, resignation or flight are their first and last resource under all difficulties. These, like the flying-fish, are preyed on by all. Paying a small revenue to the Turkish Pasha, who, after extorting what he can from their poverty, does not pretend to protect them, plundered or slain by the Abyssinian chiefs whenever leisure or the prospect of booty invites them,

and frequently beholding their flocks and herds harried by the Shohos, or the peasants of Hamazayn, they have little repose and no profit. Their days are few and evil, being passed in poverty, degradation, and toil; and when old they are sent by their younger relatives to guard the goats or camels, until death finds them at the task. To these evils they oppose a patient stupidity worthy of their own camels, and the fatalism of their creed; they have, moreover, by nature so gay a temperament, that dance and song are for ever resounding through their villages. They are not ashamed to work, and are far more useful than all their conceited neighbours.

"This race is the only one in these parts willing to submit to any government, and demanding only protection and tranquillity; acknowledging at once Turk, Naib, or Abyssinian, King or Kaiser, as they may offer; they not unfrequently add a sigh in wishing for the mild equity of the English, having, in spite of Turkish jealousy, heard fabulous tales of the splendour of Aden under our rule.

"With the exception of some villages on the coast that serve as a rendezvous for the small traders who supply the island of Massowah with provisions, and whose inhabitants supply, by their camels, wood, grass, and other necessaries, they are in general a wandering race, camping wherever pasturage is to be found, and stretching as far as

Hamâzayn when permitted. The constant exactions of the Turks, if they have impoverished, have at least rendered them mild; and I scarcely think that, had they as much courage and independence as the adjacent tribes, they would be much better; as it is they are inoffensive and invaluable as a labouring class.

"The language of the Bedouins, as of the natives of Massowah, is a corruption from the ancient Geez, with a large infusion of Arabic. Infanticide is common among them, and spoken of with indifference. The Turkish Pasha, of course, does not interfere, as his revenues are not affected. The practice is confined, I believe, to their illegitimate children."

The river Hadâs issuing from the gorge in the mountains near Hamhammo, and a few miles east finally debouching on to the plains of Zulla at the watering-place Hadôda, receives near this point the waters of its tributary the Alliguddé, and subsequently becomes united on the plains with the Nebhaguddé flowing from the gorge at Komaylé. The three torrents united flow through a narrow and precipitous pass in a low range of hills about seven miles from the sea-coast. The river thus formed has a bed about 150 yards in width where it emerges on to the plain above Zulla, and bears the name of Hadâs, although the so-called tributary

Nebhaguddé from Komaylé is a larger stream than the Hadâs from Hadôda. The Nebhaguddé, however, separates into branches on the plains, and one important one flows to the southward of Zulla, and reaches the bay some distance below the site of the British encampment on the shore, which was situated on both banks of the river Hadâs. That the Nebhaguddé flows into the Hadâs above Zulla was evident, when the violent storms over the Komaylé Pass in May were followed by the flowing of the Hadâs through the British camp at Zulla. On one occasion only, a heavier storm than usual brought down the torrent which crossed the railway about six and a half miles from the shore, that branch of the Nebhaguddé having a higher level than the bed of the Hadâs.

The Hadâs passes close to the village of Zulla on its northern side, and then flows about four miles in a serpentine course to the sea. Although its bed has the dimensions of a large river, it is only a torrent. It was quite dry when the Reconnoitring Party landed on the 4th October. During November a storm brought down its waters for a few hours, which were soon absorbed. Water did not appear in the Hadâs again till the 3rd May, when a heavy storm, a forerunner of the Abyssinian rains, broke over the mountain passes, and sent a roaring torrent through the British camp, which ran out in a few

hours. Thus, in eight months of the year the river Hadâs had a dry bed with the exception of one day for a few hours. The lowland rains, which fall irregularly from October till May, are too light to affect the Hadâs. These rains produce no streams, the thirsty soil absorbing the whole, and returning the compliment by covering itself with a brilliant clothing of green, but so slight in texture, as to be easily destroyed by a few passing flocks, when the turf again lapses into its normal condition of loose alluvial dust.

From the sea-coast to about five miles inland the plains are covered with thick green bushes, the wood of which is used for firewood. The shore, when first seen on the 4th October, presented, from the steamer, the imposing appearance of a dense green jungle; and on landing, the paths between the bushes, winding in and out, had to be followed. Fortunately this bush had no thorn. The Engineer department, after cutting a road up to the wells through the bushes, speedily turned them to good account, and by making them into fascines, and pegging them down with stakes, used them as retaining walls to the filling in of the pier, until stone was obtained for the purpose. When the troops left the coast not a bush could be seen for many miles, the whole having been cleared off for firewood and for forming huts for the followers.

The inhabitants of the native village of Zulla, which is the most considerable place in the low-lands, do not get a drop of water from the river hard by, excepting when the torrent chooses to flow, which it does not for nearly eight months at a stretch. Consequently, the water used in the village has to be brought in skins all the way from the wells at Mulkuttoo. This water-carrying goes on all day, chiefly by the young girls of the village, who, to avoid the bushes, wend their way down to the shore by following the dry bed of the Hadâs. The skins of water are carried much in the same way as already described of the Massowah people; but the Shohos and Bedouin women of Zulla did not present the same pictures of abject slavery as their less fortunate sisters of that vile place. They were not overweighted in the same manner, and appeared stronger, and as if the water was intended for themselves and their families, not that they were the mere hired beasts of burden of others.

Where the green salt bushes, of two kinds, end, the thorny acacia or mimosa, called in India the *baubul*, commences, and with it the misery of mankind. Though food for the camel, it is the enemy of man. These trees, which a few feet from the ground spread out like a tea-cup, are flat at the top, and growing close together, form a barrier to progress only to be removed with the axe. The

tree is a terrible antagonist to the explorer and sportsman. Impenetrable excepting where the natives and their flocks have worn a path, to attempt to push through it only ends in failure, the loftier branches always having a few fish-hook-like thorns ready to uncover the rider's head the moment he thinks his way clear to pass on. In traversing this thorny jungle the most angelic temper soon gives way; but as hard words break no bones, neither do they cut down trees, so the traveller perforce relapses into a perfect state of resignation, and in time regards the destruction of his apparel and the scoring of his skin with indifference. The alluvial deposit of the plains, which gravitates towards the sea-coast, leaves the plains at the base of the mountains rugged and rough with rocks and stones, and on this ground the baubul of Africa, which differs somewhat from that of India, flourishes.

On the northern bank of the Hadâs, just opposite to the village of Zulla, an extensive mound of earth, stones, and débris of decayed buildings marks the site of an ancient Grecian colony, the famous emporium of Adulis. Adulis is described in Arrian's Periplus of the Red Sea as lying in a deep bay, and having in front of it an island called Orine; and as being the place whence the caravan road passed to Coloë,—whose modern representative (according to Dr. Beke), Halai, retains its ancient name in a

corrupted form,—and thence to Axum, and so across the Takkazye, the Nile of the Ethiopians. Orine is the Dissee Island already described.

The Periplus gives the distance of Adulis from the sea as twenty stadia; by Cosmas Indicopleustes it is said to be two miles. Its present distance is about four miles. The Greeks, forced to abandon Adulis, retired to Dissee Island. Before leaving the country Sir Robert Napier was anxious to have excavations made in the mounds of Adulis. Blocks of apparently trap or volcanic rock, forming the pillars of a small but massive construction, were found embedded a few feet below the surface. These blocks were well squared with plain chamfers, but showed a rude stage of art. A few white marble fluted shafts of small size were also obtained, and some slabs of very pure alabaster, which had probably served for paving. One small carved capital of Byzantine type, with flat leaf foliage, not earlier than the ninth century, was discovered. It is not very likely that antiquarian or other treasures would be found in these mounds worth the expense of excavation, as the remains are those of a naturally decayed village,—city must be an exaggeration of terms,—and not those of a metropolitan or important centre of a country which has suddenly become engulphed or destroyed. The excavation of these mounds is doubtless beyond the means and

appliances of the present inhabitants of the country, but it was not always so. The Shohos have converted one portion of the mound into a burial-ground, and some of the graves are ornamented with fragments of marble shafts.

The Shohos and coast tribes are not handsome, neither are they so ugly as the negro. They have gaunt visages and forms and strongly marked features. Their personal vanity is concentrated upon the hair of the head, and the forms into which it can be dressed. They give up their whole minds to it, and become great coiffeurs. Some wear the hair well frizzled out all round; others swell it out into two mops, one below the other; others again, after arranging it in thin long curls, draw them in behind, and allow the ends to hang down in a long bunch, which shakes with every movement, and presents to Europeans a ludicrously effeminate appearance. Combs and brushes being of course unknown, their only implement is a stick like a knitting-needle, which, when not in use, is kept stuck in the hair, just as a lady keeps her needle stuck through a ball of worsted. The native pomade in use contains no oil or essence, and is altogether innocent of the perfumer's art. Fat, masticated in the mouth, is plastered on the head in the early morning, the sun's rays soon causing it to melt and run not only over the head, but also down the clothes and body

of the unwashed and unsavoury savage. The whole thing is perhaps repugnant to a weak stomach in a tropical climate before breakfast, but it does not do to be hypercritical in the plains of Zulla. The men wear a cotton robe, or toga, wound loosely round the body and over the shoulder, the head and feet being bare. The Shoho is armed with a spear, a leathern shield, and a curved sword on the right side fixed tightly to the waist, with the curved end sticking out behind like a tail. The sword is drawn with the right hand, in the same manner as a dagger would be. Altogether, to do the Shoho fair justice in these days of impartial criticism, it must be said that when he is met in the jungle fully armed and greased, he looks a most unmitigated barbarian. The women, dirtier than the men, wear a leathern petticoat, and a piece of the same elegant material hung by thongs round the neck over the bosom. The neck-piece is ornamented with cowrie shells, and strings of these shells are worn round the neck hanging over the leathern breastplate. Shoho fashions are simple, and have not probably varied for many generations. History repeats itself, so do fashions in hair; and thus the Shoho lady wears her hair *en chignon*. There are some small differences in detail, but the types of London and Zulla are the same!

Boys and girls have their heads shaven, but tufts

in front and behind are left on the cranium, or a narrow ridge of hair is allowed to stand up from the forehead to the back of the head like a hogged mane. Although the Shohos and Bedouins live so near the sea, they do not appear to have discovered the benefits to be derived from sea-bathing. The Bedouins, as is their custom, soon commenced begging in the British Camp at Zulla, and being tempted by so many little valuables, such as grain and cooking-pots, lying about, made many petty attempts at plunder. They soon discovered their mistake through the vigilance of the Provost Marshal. They then resorted to the ingenious expedient of sending their wives to beg and pilfer instead of themselves, and finding that the Briton was, in their eyes, so weak as to respect the persons of the female sex, the camp became infested with a horde of intensely dirty-looking females, beggars and thieves, which became, for a time, the bane of the camp-followers. The Provost Marshal, however, again stepped in and checkmated the fair and gentle pilferers. He despoiled the detected of all their ornaments until the stolen goods were recovered. Disgusted with this retaliation on the part of their visitors, the Bedouins then resorted to the stealthy plunder of commissariat grain-bags, dropped on the road by rascally mule-drivers to enable them to ride in their stead. Here, again, the

native ingenuity was overreached by Lieutenant Mockler's detectives of the political department. Sudden and successful descents were made upon certain newly founded villages, the depôts of such stolen goods. The honey was taken, and the bees were scattered abroad.

The Shohos and Bedouins, being pastoral races, live chiefly on meat and milk, which, like the South-African Kaffirs, they keep in baskets of their own manufacture, very neatly and closely woven. But they value rice highly, and are glad to get any kind of grain. Their country being infested with hyenas, they are very careful to bury their dead securely, placing the body in an excavation made in the side of the bottom of a deep grave, so as to leave the soil actually above the corpse untouched. Unacquainted with mortar, rough slatey slabs are set upright over the graves as headstones, and pieces of white quartz are often placed around them for ornament.

Of course the Shohos have no roads in their country, simply cattle-tracks; and they never think of moving a stone out of the path, contenting themselves with occasionally twisting down an obtruding branch. When the railway was made from the shore to the base of the hills, as the line could only be fenced where it passed through the camp, although ditches were excavated on each side, the

cleared track through the jungle was too tempting a route to be resisted, and the natives with their beasts of burden could not be kept off it. Facing the engine and train, they never attempted to get out of the way until it was almost upon them, when, if the driver had not pulled up, they would have been run over. If overtaken, nothing would make them move off the line until the driver, bringing his train to a stand, the guard jumped off and energetically made them comprehend their presence was not desired. Of course the ditches then became as much an obstacle to the cattle getting off as they were intended to be to their getting on, and the trains were daily delayed from this cause. Although the Shohos were glad enough to use our roads in the plains and passes, yet they disapproved, on principle, of such aids to traffic. Their enemies would only be enabled to reach them the easier, they said. Had the Bedouins, only, expressed themselves in this manner, being a weak race, their antipathy to roads would have been readily understood. But the Shohos are a powerful tribe, and probably more aggressive than their neighbours. Moreover, being hill-men, they are more active and better climbers than the Abyssinians and Bedouins. This may account for their expressed dislike to roads, as such works would tend to place their enemies on a par with them. If the Abyssinians could manage to

bring all these hill tribes into thorough subjection, it would be a good thing for the country.

The Shohos were, of course, astonished at everything they saw connected with the establishments at the Zulla Camp. The fleet of ships in the Bay was wonderful. They could never have believed that all the nations of the earth possessed so many vessels. Numbers had never seen a ship even, far less a steamer; but, of course, many of them were familiar with their appearance, having seen a steamer occasionally at Massowah and in their own bay. The elephants being tamed were surprising, for although the Shohos find plenty of these animals in the hills, they were not aware they could be tamed, and rendered subservient to man. The railway and "fire carriage" was astounding, especially when they found they could not keep up with it; but the greatest marvel of all was the conversion of the sea into drinking-water. This scientific feat came closest home to them, the dearth of water in their country being their greatest difficulty. Although not allowed to carry away water, they were permitted to drink out of the cattle-troughs; and numbers of them engaged about the camp, used to dip their mouths to the clean and sweet water with as much relish as a thirsty Briton puts his to a jug of beer.

In short, the character of the Shoho might almost be summed up with the terseness and brevity of the

traveller, who, being asked to write a description of the manner and customs of the savage race he had visited, found nothing more to say on these points, but that "Manners they had none, and their customs were beastly." But this would not be quite fair of the Shoho, for they are evidently a tractable race, and although savage and relentless when they have the power, proper government would soon foster their good qualities, to the extinction of many bad ones. As guides their conduct was beyond praise.

The climate of the lowlands may, with perfect justice, be called one of the worst in the world, if great heat and disease consequent upon high temperature be taken as a standard. Probably the Western Coast of Africa, many parts of the Nile, the jungle country in the Madras presidency, and many other parts of India and the East, may be more unhealthy and detrimental to life; but for discomfort produced by extreme heat, which is scarcely tempered in the one cool month, probably the Salt Plain, which is below the level of the sea, and the plains of Zulla in a somewhat less degree, bear the palm. This is the point of view taken by the European. The natives of the country do not seem unhealthy, for this race is acclimatized, and they are used to it. The Abyssinian dislikes heat as much as the European, and has the greatest hatred and contempt for the lowlands.

From the 4th October, when the Reconnoitring Party first landed at Zulla, the thermometer used to stand at midday in double-roofed tents at 104°; and from the 4th to the 18th, the hot winds, which blew after a stagnant early morning until late in the afternoon, somewhat resembling the hot winds of the Deccan, were most trying to the European constitution. On the 18th the hot winds ceased, but the daily temperature was not much affected; and on the 3rd and 4th of November, the dust-storms and heat were the same as above recorded.

Towards the end of December the thermometer fell to 84° at 9 A.M., and during January to about 80° at that hour. February was the coolest month, owing to the showers of rain which constantly fell. The temperature this month ranged about 75° at 9 A.M. for about twenty days, being, of course, higher at midday, and this comprised the winter. The thermometer now began to rise rapidly and continued to do so till the 25th March, when it registered 112° in a double-roofed, and 121° in a single-roofed tent at midday. This extreme heat continued, with variations between 100° and 112°, till the end of April, when clouds began to gather over the mountains to the south of the bay, and to travel in a north-westerly direction along the Abyssinian range. On the 22nd April, with scarcely any warning, a tremendous gale from

the south swept over the bay and the British Camp, and at once levelled nearly every tent in it, but none of the buildings were destroyed. The shipping, thanks to good anchorage and the good management of Captain Tryon, R.N., Director of Transports, suffered very little. Those on shore did not fare so well. The gale, which first blew down the camp, was accompanied by heavy rain, which soaked everything. One officer, the head of an important department, endeavoured to excite the sympathy of his drenched companions by groaning deeply for the fate of his lost records, which flew careering over the country; but he soon became comforted, when a friend pointed out, that a hurricane or a bad fire were the best auditors of unadjusted accounts a responsible officer, steeped in perplexities, could possibly meet with!

Heavy storms of rain in the mountains, which now became of frequent occurrence, brought down the river Hadâs, which ran out in a few hours. The temperature till the middle of June varied from 94° to 108° at midday, and doubtless this great heat continued until the month of October came round again.

The whole time Zuñia was occupied dust-storms were of daily occurrence, and continued the greater part of the day until the evening sea-breeze set in.

In the highlands, the variation of temperature in

the twenty-four hours was great, but the climate was pleasant and bracing, though latterly the frequent storms caused much discomfort. At midday about 75° of heat; at night, the thermometer fell from 45° to freezing point. The difficulty was to keep warm in the evenings and nights, not how to get cool in the day. There are no dust-storms or hot winds in Abyssinia.

The climate in the lowlands is most deadly to horses and mules; especially so from the latter end of November till February. The disease popularly called "African glanders," from the glands about the head and neck being affected—according to Veterinary-Surgeon Lamb—is one of the blood, and is attributable to atmospheric causes.

The Shohos do not use the camel, excepting from Massowah to the foot of the mountains, as these animals are useless in the rugged passes. Oxen and donkeys are their principal beasts of burden, as these animals pick their way easily over rocky and bad tracks. They treat their animals with great cruelty.

The Shohos have no horses, though some possess a few miserable ponies. They have large herds of cattle, and flocks of sheep and goats. In many parts of the lowlands where water is scarce the cattle only drink every other day. There are very few dogs in the country.

The valleys in the Shoho country are frequented by herds of elephants, which occasionally come down into the plains to feed. They sometimes approach close to the sea-shore, and have not the same dislike to sea-bathing that the Shohos have. These animals in this part of Africa are especially hill-elephants, living chiefly in the mountains. They are extremely active, rushing with great rapidity up and down steep places difficult for even a man to get over at any pace. Going at speed they experience no difficulty in pulling up suddenly on the brink of a precipice. They do not carry the large tusks the South and Central African elephants are furnished with, though they appear to be of the same species as their comrades of the plains. The great difference in the size of the ears and shape of the head and back between the two species, the African and Indian elephant, is well known. In consequence of the activity of the Abyssinian elephant, shooting them is a dangerous, and owing to the small value of the tusks, a profitless sport. The slaying of this animal in large numbers is great butchery, and should meet with general reprobation.

Lions were never once seen or heard during the whole Expedition. They are known to exist in many parts of the country, but they are not found on the water-shed of Abyssinia, as there is little jungle there. Neither do they seem to frequent

the lowlands or mountain valleys near Annesley Bay. They prefer the easier slopes of northern Abyssinia, which are better covered with jungle, and where they can obtain their food more easily.

There are, it is well known, no tigers or bears in any part of Africa. A species of panther is called the tiger at the Cape. A few panthers were seen in the passes, but none were shot. The black panther is an inhabitant of Abyssinia, and is a very handsome animal. The black skin by reflected light reveals the usual markings of the panther.

Hyenas abound in the lowlands, but are less common in the passes. These hideous brutes at first took upon themselves the duties of scavengers, and consumed numbers of dead horses and mules. But the disease which decimated these animals in December was too much for them; and after gorging themselves for some days, they became fastidious and left those carcases, which were not burned, for the vultures, of which there were immense numbers of different species. The hyenas became very bold, and used to foray about in the camp lines every night, approaching close to the doors of the tents. They growl with deep notes in the evenings; but in the early morning, when perhaps their appetite has been satisfied, or they obtain food, they laugh in a hideous manner.

There are no monkeys in the lowland plains.

The *cynocephalus*, or dog-faced baboon, frequents the valleys in the mountains, where they congregate in troops numbering from fifty to three hundred members. These baboons are not shy; the males, which are tawny in colour, and are provided with large shaggy manes, look in the distance when walking, which they do in a very stately and sedate manner, like lions. They were accustomed to watch from the rocks the departure of the Transport Train convoys, when they would descend in large numbers and pick up any grain spilt in the mule lines.

Herds of a fair-sized antelope—there are no deer in all Africa—having the forehead a dark chocolate colour, with slashes of white and brown on the cheeks, and annulated horns a foot in length, curved forwards and inwards at the extremities, are met with all over the plains. This animal does not appear to be known in Southern Africa, or to have been described by any English traveller or sportsman. They are not difficult to shoot when met in the thorny jungle, but more so in the open plains. The weight of a full-grown buck is more than two men can carry any distance. They are very good eating.

There is a most elegant little antelope found in the bushes in the lowlands, and in the passes, generally in pairs; it is called the "Beni-Israel." It is rather larger than a hare, and is a most delicately-formed creature. This antelope must be

regarded as one of the most beautiful animals in the world. The hog-deer is met with in the upper passes.

The hyrax or rock rabbit—the coney of Scripture—is found in considerable numbers in the rocks in the mountain valleys. It is rather like a rabbit, but is not considered edible.

Hares, like those of India, are in great numbers in the plains; those in Abyssinia are larger, and more like the English hare in size and colour.

Hog are plentiful in most parts of Africa, but very few were seen in that part of Abyssinia visited by the British. They are quite a different species from the Indian or European hog. They carry very large tusks, which occasionally nearly meet in a circle over the nose.

Ostriches frequent the lowlands, but are extremely difficult of approach, their eyesight being extraordinary, and the bird naturally shy. Large bustard visit the plains, but are only met with occasionally, and are easily disturbed.

Guinea-fowl, which is an excellent bird for the table, is found in large flocks in the plains. They run very fast, and although not readily killed on the ground, are easily shot on the wing. They always run a long way before taking to the wing, which is very enticing to the sportsman, and soon blows him. These birds must be more cunning than they are

generally supposed to be, for they rise just when their pursuer is out of breath, has run into a prickly bush, or fallen over a rock, in either case effectually disturbing his correct aim.

Partridges abound in the plains. They live chiefly in the bushes on the banks of the dry water-courses. They have silver-grey plumage, the skin of the throat being of an orange colour. In the passes above 5,000 feet elevation, a splendid grey partridge is met with. This beautiful game-bird is larger than the English partridge, and, having formidable double spurs, is commonly called a spur-fowl. Its plumage is somewhat darker than the grey partridge of the plains, and it has no orange tint on the throat.

A few duck and teal of the ordinary species were found at the watering-places in the passes; and snipe on the highlands. Kullum and geese abound on the highlands, but not many quail. Vultures are to be seen everywhere.

Numbers of snakes, like the Scinde kuppa, which is very venomous, were killed in the British camp at Zulla. They concealed themselves at the bottom of the tent-walls, and shared their refuge with scorpions, of which there were large numbers.

A light grey field-mouse, with long hind-legs like the kangaroo, abounded in the camp. They became very tame, running unconcernedly about the

tents, watching dressing operations, and even eating out of the hand.

Locusts were a plague in Abyssinia in 1867, and had been there for some years. They did not appear in the passes till December, when they soon destroyed all the green foliage.

The thorny acacia-tree occupies the passes as well as the plains up to 5,000 feet of elevation. At this height above the sea, a few mangoe and cycamore trees are met with. Also the euphorbia, which has a stout stem, and, with its branches diverging from one point with great regularity, each bearing a bright orange flower like a light at the extremity, resembles a candelabra. The euphorbia appears lower down in the passes, but is much smaller, and does not attain perfection at a lower elevation.

Tamarisk-trees, corinda, and other common tropical evergreens, the euphorbia and kolqual in particular, covered either side of the valleys; but nothing could surpass the beauty of the jungle of juniper-trees, which grow to perfection and in profusion in the ravines at the edge of the table-land. These trees, of the species of cedar, grow to great size; and the wood, when split, has the pleasant odour of cedar-wood so familiar in England. The pencil, cigar-box, and spirit trades might direct their attention to these Abyssinian jungles, as the

natives only use the wood for burning, and they do not use the berries at all.

It has often been said that no rivers run into the Red Sea, and consequently that it is replenished only from the Indian Ocean through the straits of Bâb-ul-Mandeb; but this is not strictly correct. There are no perennial rivers, either large or small, emptying themselves into the Red Sea; but numerous torrents, like the River Hadâs, which run dry a few hours after a storm in the Abyssinian mountains, pour their contents into it. From the appearance of the lowland country below Abyssinia, which is scored in every direction by beds of water-courses, a few of which have the dimensions of large rivers, it might, at a first glance, be imagined, that at a certain season the country must be flooded and watered with a profuseness highly inconvenient to the inhabitants; that, while destitute of water for part of a year, they had too much of the good thing at another. But this is not so, and appearances are, in this case, very deceptive. The very number of the nullahs, or water-courses, proves that the country is not subject to a steady rainy season, but rather that it has little rain. The numerous water-courses merely carry off the storm-waters from the mountains, which, no doubt, rush down frequently at stated times, but, owing to the precipitous nature of the country, become dry in a few hours. If the

waters of Abyssinia drained towards the Red Sea instead of to the Nile, and caused large perennial rivers to flow over the lowlands, then the river-beds would be larger, and in process of time become deeply scored, to the absorption of the greater portion of the innumerable water-channels now existing.

In the Gulf of Tajûra, mountain torrents like the Hadâs flow into the sea outside the Straits; but, between the south of Annesley Bay and the Straits, probably little if any drainage from Abyssinia reaches the sea. Vast plains in this lowland country are below the sea level. In one part, a salt lake is formed, which receives all the drainage not absorbed by the thirsty soil. In the long-continued dry season, the waters of the lake evaporate, leaving on the surface of the briny residue a thick incrustation of salt.

A consideration of the formation of these inland salt lakes is interesting. There is another salt lake inland from the head of the Gulf of Tajûra, named Lake Assal. The Dead Sea is the most familiar example. The theory respecting the formation of these lakes is, that they have originally been, as it were, cut off from the sea, either by sudden convulsions of the earth's crust, or by a slow and gradual process of the rising of the land surrounding them. This last has been the case of the Abyssinian low-

land Salt Lake, and probably of the Dead Sea also; but it is more likely that the Lake Assal has been, as suggested by Major Harris, cut off by volcanic convulsion from the Gulf of Tajûra. Lake Assal is 570 feet below the Gulf; but this depth, added to that of the lake, equals the depth of water in the Gubbat-el-Kharab, at the head of the Gulf, namely, 696 feet. The waters of the Lake Assal have evaporated, but remain at their present equilibrium, by the inflow of a certain amount of drainage.

In like manner the Dead Sea, which is about 1,300 feet below the Mediterranean, receives the waters of the Jordan, which prevents it from evaporating into a mass of salt. These inland salt lakes have different densities, according to the drainage received. Thus the Salt Lake has a thick incrustation of salt on the surface, whereas the Dead Sea has the appearance of any other sea; but the water is nearly saturated with brine, which causes it to be unusually buoyant.

Notwithstanding, as has been already stated, some fresh water does pour into the Red Sea, yet the quantity is so infinitesimally small as compared with the area of that inland sea, as not to be worth consideration in discussing its characteristics.

The heat of the sun, which produces evaporation from the surface of all waters, whether fresh or salt, converting the fluid into vapour, is a constantly

recurring natural process; Nature's distillery in fact, whereby the water of the seas converted into clouds drifts hither and thither by the winds, and returns to earth free of saline matter, for the refreshment of man and the land he occupies. Supposing that five feet of water are evaporated in the year, it stands to reason that the residue becomes daily much more highly impregnated with saline matter. In process of time, therefore, the seas would become vast basins of salt, were it not that the vapour, of which it is robbed, is returned by means of the fresh-water rivers which pour into them. But the vapour which is drawn from the different seas by the sun's heat is not equally returned in this manner. On the contrary, the Red Sea, which, from its situation near the equator, loses by evaporation more than the northern seas, only receives back from mountain torrents an inappreciable quantity of fresh water compared with what it parts with. Thus its waters would necessarily become more and more saline every year, and eventually dry up, leaving behind a huge basin of salt, did not other causes interfere with this process. More northern enclosed seas, like the Baltic and Black Sea, receive more than they lose of fresh water from the large rivers which flow into them. The water of the Bosphorus, again, is almost sweet; and a strong current flowing through it from the Black Sea to the Sea of Marmora and the Mediter-

ranean, dilutes the water in that enclosed sea. A strong current from the Atlantic also flows into the Mediterranean by the Straits of Gibraltar, and helps to restore the equilibrium of level and the density of its waters.

The Red Sea, having no inflow of perennial rivers, must be dependent upon the waters of the Indian Ocean, which pour through the narrow throat at the Straits of Bâb-ul-Mandeb. Consequently, it may readily be comprehended, why the waters of the Red Sea are denser and more highly impregnated with saline matter than the Indian Ocean itself. To complete the theory of this process, it must be supposed that an under-current of denser sea-water is continually flowing out of the Red Sea at the Straits.

The plains of the lowlands of Abyssinia are completely shut in from the south-west trade winds or monsoon. The clouds which are formed of the moisture evaporated from the ocean at the equator are obstructed in their course by the highlands of Abyssinia, which condense them, and thus obtain a plentiful water supply. The crest of the water-shed of Abyssinia follows very nearly the eastern margin of the country. Consequently the great rivers run towards the Nile, and, as has been shown by Sir Samuel Baker, cause the yearly inundation of that noble river. The lowlands, therefore, receive no

very great amount of drainage from the table-land of Abyssinia. This table-land, by the deep and precipitous ravines with which it is intersected, gives proof of its antiquity, and of the amount of its water supply. Rushing waters have here scooped out of this strangely elevated plateau huge channels several thousand feet in depth; and the soil, which was once cultivated in Abyssinia, and filled these mighty chasms, is now subject to the tillage of the Egyptians along the delta of the Nile.

In process of time, after the lapse, in fact, of a geological period, the very majesty of the Abyssinian mountain will prove its own destruction. The ravines will become larger and larger, until the whole table-land is swept away, and a few lofty mountain peaks will mark the site where the only nation enjoying a temperate climate in the tropical zone once dwelt.

Abyssinia, as a nation, has stood still for ages, blockaded, as it were, from the rest of the world. The policy of England, and now probably that of Europe, is to leave her in the same helpless position, and discountenances all intercourse with the only land in the tropics adapted to the organization of the northern races. For India can never be more than held in trust for the natives of the country, and as giving temporary employment to a portion of the surplus population of Great Britain. Abyssinia is

therefore not likely to alter much her condition for several centuries, for another cycle, may be, till, by the destruction of the country from natural causes, the nation, once Christian, becomes physically and morally on a level with the heathen and savage races of Africa. Her prospects are not good; they are not even fair; they are most gloomy.

The key to the present condition of the Abyssinian nation is to be found in the isolation in which it has passed its days, combined with the physical conformation of the country. Shut in upon their own mountains by hordes of Pagans on one side, and by Mohammedans on the other—having no relations with, and but little knowledge of, the outer world—the energy of the Abyssinians has been expended in internecine quarrels and civil strifes. The impracticable nature of the country has tended to foster and protract these evils, for every hill is a fort, and every ravine and pass a natural fortification. With a more level country of the size of Abyssinia—which is only about twice the size of Great Britain—the nation would have become, ere this, more united, or at least more subject to the control of a dominant power.

Although the mountain tribes of Shohos, on the north-east frontier, have reason to fear the power of the Abyssinians, the absorbing nature of the domestic quarrels of the latter is taken advantage of

by the mountaineers, who interfere at their pleasure with the little intercourse the Abyssinians have with the coast. Massowah merchants, willing and able to trade with the country, have always had their operations sadly interfered with by the Shohos; and the Abyssinians are fully alive to the fact. The Shohos are for ever killing the goose that lays the golden egg, proving how closely allied stupidity is to savagery. Nor are the Egyptians any wiser, for they sacrifice the present and material wealth which trade confers for a chimera; and have so little reliance on the advancement of the power of their own nation, as to fear the prosperity of Abyssinia may prevent the fulfilment of their own ambitious desire to possess the country.

Sir Robert Napier, before leaving the country, gave the Abyssinian rulers very sound advice. Abyssinia appears to have been divided for generations into three provinces, and at the time of the British invasion each province had its independent ruler. Dajjâj Kâsa ruled in Tigré, Wakshum Gobazê in Amhara, and Prince Menelek in Shoa. Theodorus, at different times, conquered the whole of Abyssinia, but he never could control the three provinces at the same time; and his endeavour to accomplish this feat, by force of arms alone, led to his downfall and final destruction. Dajjâj Kâsa, who only rose to power in Tigré in October, 1867,

received, as he well deserved, besides advice, substantial aid from the British commander in the shape of muskets for a regiment, and a battery of mountain guns and mortars. Colonel Kirkham, an English officer, is stated to have taken service with Prince Kâsa for the purpose of drilling his troops, infantry and artillery. It is to be hoped that this, as far as we know, well-intentioned prince, may not be incited to aggression on his neighbours, as appeared to be contemplated, if the latest published intelligence of his proceedings is to be credited. But the Abyssinians have greater cause to fear the results of Sir Samuel Baker's expedition up the Nile, as that gentleman must now be considered a servant of the Egyptian Government. If any rectification of the Egyptian border towards Abyssinia be in contemplation, the proceedings of this expedition should be jealously watched. Prince Kâsa should be invited to co-operate in fixing upon and marking out a frontier, and to join the Egyptians in a mutual endeavour to put an end to the perpetual warfare and barbarities for which both nations are now answerable. As there must be two parties to every contract, the Egyptians can only fix the boundaries of the two countries by force of arms. Sir Samuel Baker is not likely to lend himself in aiding the Egyptians to aggrandize their country at the expense of the Abyssinians, and it is therefore to be hoped that

his operations, with an armed force at his back, may be confined to the suppression of the slave-trade on the borders of the Nile. But this is not the plan to succeed in putting a stop to the traffic in human flesh. It is beginning at the wrong end. The demand should first be cut off; the supply would then very soon cease. Sir Samuel Baker is no doubt in thorough earnest in the work he has in hand. Whether the Egyptians are so, at least on this point, may be doubted.

The lowland country of Abyssinia then, as has been shown, benefits but little by the south-west monsoon. Completely enclosed by the mountains, this rainy period becomes the hottest season of the year. Nevertheless, the country derives its scanty water supply during this season, for the monsoon clouds occasionally circle round the summit of the eastern range, or, overlapping it, discharge their contents into the numerous valleys, fertilizing them in many places, and replenishing their springs. These mountain storms are usually very heavy, and the valleys speedily becoming saturated, the surplus waters plough across the lowlands and finally disappear in the sea. The land and sea to the eastward being open, the north-east monsoon reaches the lowlands. But this monsoon has parted with all its moisture before reaching the Red Sea, having been, as it were, wrung dry whilst traversing the

deserts on its way. The Red Sea is merely sufficient to re-charge it slightly with vapour, and but little moisture reaches the land from this quarter; and the mild rains, which occasionally occur, only partially saturate the soil.

There was a time when the Red Sea washed the base of the Abyssinian mountains; when the peninsula of Buré, and other volcanic hills of the lowlands, were islands like Dissee and Dhalac; and when the Salt Lake was part of the Red Sea. Even in the days when Adulis, on the plains of Zulla, was flourishing, the shore of Annesley Bay reached further inland by two miles than it does now. The destruction of the Abyssinian highlands, feeble as it is on the eastern slopes compared with the process on the west, yet yearly progresses; and the detritus brought down by the denudation of the upper strata, and the scouring of the lower, is deposited on the lowland plains, and gravitates to the mouths of the torrents. The Hadâs thus yearly increases the deposit on the western shore of Annesley Bay, and in process of time will fill it up. Nature performs her engineering feats on a large scale, and only requires time to carry out her reclamations. The coral insect assists in the general work, and aids in the reclamation of the Red Sea by building its cities in its waters. The time will come when, by these agencies, the effects

of which can be predicted, and perhaps by fresh volcanic agency which cannot be foretold, the whole of the Red Sea will give place to land; man will walk where the sea now is; and, looking perhaps upon the waters of a second Dead Sea, speculate how it came there.

The uppermost stratum of the Abyssinian plateau consists of a light grey sandstone. The cleavage of this rock is horizontal, yet it wears away from want of support in a vertical direction. The summits of the peaks in the highlands present in the distance the same forms as the scarped mountains which have been, in former days, converted into hill-forts in the Deccan in India. Next below the sandstone come the metamorphic rocks, consisting of clay slate, mica slate, and gneiss, which have been terribly disturbed. The strata are tilted up at a high angle in a south-westerly direction. These rocks have a depth of several thousand feet. In the passes where these strata have been cut through and become exposed, they vary much in hardness, but most of them, gneiss excepted, when exposed to the air, become soft and friable. In some hills near the village of Bahât, about seven miles south of Senâfé, the slate rock crops up as hard and as blue as the Welsh slate. The schistose rocks are intersected by numerous veins of quartz, and the micaceous rocks, by the reflected light

of the sun and moon, have the appearance, at a little distance, as if they were wet. This effect, as need hardly be said, in these almost waterless passes, is as delusive as the mirage in the desert. As gold is obtained from the quartz veins in the metamorphic rocks of the Atlantic shores of Nova Scotia, and in the pounded shale, it might perhaps be found in these Abyssinian valleys.

The gneiss rock, which underlies the clay and mica slates, makes its appearance at from 2,000 to 3,000 feet elevation. Volcanic rocks and a few lava dykes are exposed in the passes. These rocks pass under the sea, the shore being composed of alluvial soil consisting of the débris formed by the denudation of all the superior rocks mentioned.

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